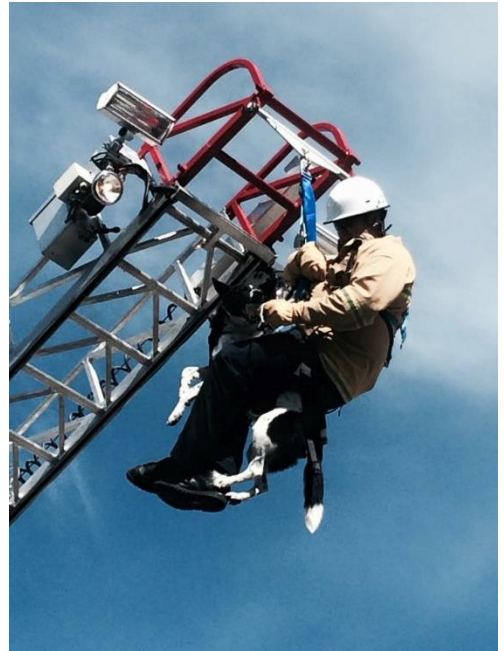


ANIMAL TECHNICAL RESCUE AWARENESS



STUDENT MANUAL

*July 2017
Edition*

Introduction

Large animals may present an extreme range of speed and force. This Operational/Technical level course will provide background knowledge and skills to allow you to more safely and successfully respond to the low frequency and high-risk Animal Technical Rescue (ATR). The success of ATR responses can depend on subtle nuances, and how the animal thinks and reacts. The dangers of ATR lie in the extreme range of responses that we might encounter, and our imperfect control of the animal, the scene and ourselves.

The success of ATR can depend on our ability to organize what could be a highly charged, emotional scene, in challenging terrain, in difficult weather, by applying the following concepts and techniques.

Acknowledgements

The Cadre for Animal Technical Rescue

The material contained in this document was compiled and organized through the cooperative effort of numerous professionals associated with Fire, Veterinary, and Animal Behavior Services. We gratefully acknowledge these individuals who served as principal organizers for this document.

John Fox , Fire Chief City of San Juan Bautista Fire Department
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Chapter 1 – Introduction to ATR

At the end of this topic, a student will be able to identify the need for and difference between Technical Rescue and Evacuation, and understand the social, political, and public issues related to animal rescue services. The student will be able to describe types of disasters and how ATR might be a component of disaster or evacuation responses.

This course provides the basic information regarding the skills and resources necessary to respond to an Animal Technical Rescue (ATR) incident as a single incident, or as a component of large scale disaster involving large animals, service animals, and humans.

“Animal Technical Rescue is the process of removing an animal (small or large) from a position or event that is threatening its safety or well-being.”

Knowledge of animal behavior, characteristics and anatomy helps the rescuer apply existing technical rescue skills and strategies to resolve an animal incident. Some ATR incidents require technical skills that lie well within the scope of fire service training.

Recognizing the Need for ATR

Companion animals, working and service animals, and livestock are all subject to natural or manmade disaster and may suffer entrapment or entanglement. Knowledge of animal behavior, characteristics and anatomy helps the rescuer apply existing technical rescue skills and strategies to resolve an animal incident.

- **Rescue:** the act of saving an animal from danger or harm
- **Extrication:** the act or process of removing or freeing a victim from entrapment or entanglement
- **Evacuation:** the withdrawal from a place in an organized way for protection

Although these are three distinctly different operations, the skills sets may overlap.

Humanitarian groups will “rescue” starved or abused animals that are so compromised that they need ATR skills to transport or care for them. Rescue and Extrication are more single incident responses but may be a part of an Evacuation (EVAC). Evacuation is generally associated with the chaotic atmosphere of disaster. The skill set for ATR is more technical in nature than the skill set for EVAC.

Why Rescue an Animal?

Emergency responders are compelled to rescue large animals, particularly horses, because they have economic, emotional, and historical value in our society. Emergency responders are compelled to rescue small animals, such as dogs, because they are working partners, companions, and heroes.

Companions



Photo John Fox

ATR Awareness will focus on horses because they are the most common large animal that is rescued. Horses can live up to 40 years and might assume status as a family member. In the book Seabiscuit by Laura Hillenbrand, Red Pollard says “You know everyone thinks we got this broken-down horse and fixed him, but we didn’t. He fixed us....”

Recreation and Competition

Many fire districts have no idea that their trails may host a hundred some horses and riders at a time, scrambling up hillsides, swimming waterways and careening around trees in the course of an organized endurance ride. Departments can be pro-active by offering medical standby in case of accident.



Photo John Fox



Photo Debra Fox

Dog trails give owners an opportunity to have fun while building a team relationship.

Investment

The dairy and beef industry are important parts of this country’s food chain and economy. In fact, according to BSE Info “beef cattle production alone represents the



Photo Creative Common



Photo Eddie Yates

largest single segment of American agriculture.” The horse is a resource for managing herd movement. The original “ATV”, the horse can access cattle in rough terrain that is inaccessible to vehicles. Horses seem to understand the bovine body language and can truly be an invaluable working partner.

Rank rodeo riding bulls and horses can cost well into 6 figures. These animals represent a source of income. Other professional rodeo events such as steer wrestling or roping requires the pairing of two athletes



Photo Kristi Fredrickson

The time, money and trust that are put into a show horse, or service mount are not easily replaced if anything happens to them. Horseback riding is recognized through many Olympic events and emergency rooms recognize riding as an extreme sport. However, training and trust can carry a rider and mount safely over an enormous obstacle.



Photo Scottsdale PD

Training and trust can carry a police officer and his mount safely into a civil disturbance. In the photo above, Zeus and GH make contact with a subject.

Horses are proven to be effective for therapeutic riding programs which heal and restore the physically and mentally impaired, as well as those struggling with PTSD. As Winston Churchill put it, "There is something about the outside of the horse that is good for the inside of a man."



Photographer unknown, Found by Bartholomew & Front

had difficulty on the slick pavement. These horses were soon replaced by motorized pumpers, engines and ladder trucks.

Horses are inextricably intertwined with the growth of our civilization, from war to agriculture to commerce. Many aspects of today's life are based on the horse including railroad widths and road sizes. Together we owe an incalculable debt of gratitude to the equine genus. This photo of an Allentown PA pumper dates from 1905. Newly paved roads made the run to fires hazardous as the horses

Small Animals

Most of us have experienced the unequivocal love of a good dog who is quick with a tail wag and abundant kisses. Dogs and cats are cherished members of American families, hunting partner, protector, companion and heroes willing to work for a pat, toy or dog bone.

Some roles that small animals play...

- Protection
- K – 9
- Therapy Dogs
- Diabetes detection
- Bedbug detection
- Military



Photo Soleil Dolce



Dogs as working partners and heroes are valued for their keen sense of smell and their willingness to please.

When we put animals into service, we have a responsibility to know how to help them if they become trapped.

Helping Animals

The multi-billion dollars pet industry confirms the importance that owners place on their companion animals. As with small animals, people rely on horses and livestock for recreation, companionship, and livelihood to the tune of 13.8 billion dollars in California alone. As tangible property, animals easily fall under the obligation of public safety agencies for response and protection. Whether the patient is a snarling trapped dog, or a 1,000 lbs. horse with iron shoes, a training becomes imperative. ATR is very much a low frequency high risk skill.

Beyond the economics of animals, dogs offer unequivocal affection, and horses provide a glimpse into ourselves.

This photograph of an officer with a down horse shows that the bonds between working partners especially, run deep.



Photo American Justice League

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Chapter 2 – Types of ATR Requests

At the end of this topic, a student will be able to identify the need for and difference between Technical Rescue and Evacuation, and understand the social, political, and public issues related to animal rescue services. The student will be able to describe types of disasters and how ATR might be a component of disaster or evacuation responses.

Entrapment or entanglement may strike an animal at any time as a single incident or in the course of a natural disaster.

EMERGENCY	DISASTER
A localized event that involves the safety, health or welfare of a single or small group of animals.	A widespread event that results in serious harm to the safety, health or welfare of a large number of animals.

The training and application of ATR skills to single animal/single incident response is the best way to gain competence in preparation for a multi animal/disaster response.

Common ATR Requests

- Barnyard/Stable/Stock Yard Incidents
- On Road Incidents
- Off Road Incidents

Initial size-up will categorize an ATR according to one of these categories. The category of incident will dictate which agencies have jurisdiction.

Barnyard Incidents

Humans often confine horses to unnatural environments. Without the necessary space, a horse may not be able to use his legs properly to get up. When a horse is stuck in this way, we say that he is “cast”.

Natural attraction to a companion next door can lead a horse to attempt a “breakout”. This incident was resolved by using “jaws” to cut the stationary object away from the animal.



Photo Ron Rickabaugh



Cows and horses may become cast in water or feed troughs. Why? Who knows? They may be trying to cool off on a hot summer's day, or a herd mate might jostle them into a pickle.

Other barnyard incidents include getting stuck in trees, fences, sink holes, in a barn loft, and whatever else an animal can think of.

Photo Mario Preciado

On-Road Incidents

A trailer is probably the most unnatural environment an animal could find itself in. As the great horseman, Buck Brannaman has said, "their mothers told them to never go into caves, because bears live there". But we tell them to go into trailers, and they do go, and accidents on the roadways happen. A horse or cow might slip and fall in a trailer that has poor footing. A trailer like the one on the right, may become detached from the tow vehicle. Horse trailers carry weight loads of 3,000 pounds or more. On windy mountain roads, they can detach and swerve over the side. In addition to roadway collisions, loose horses and cows may wander onto a roadway and be struck by oncoming traffic. This is a serious event that may involve tremendous mechanism and possible fatality for animal and human victims.



Photo Rob Martin

Off-Road Incidents



Photo John Fox

Many off-road incidents are related to riding. A good day could end up badly with the smell of a mountain lion and a spooky horse, or a trail that is geologically unstable, or a rider that is not paying attention. Horses can slip over the side of steep mountain trails, fall through bridges, become entangled in trees, become stuck in mud or wet sand, and suffer entrapment between railroad ties on a trestle high above a water way.

ATR incidents may be remote and access may be difficult. Equipment must be backpacked in for remote victims like this horse who slipped off a bridge into a gulley. Rope systems on a bomb proof anchor (a redwood tree in this case) saved this wayward horse.

Common ATR Requests for Small Animals

Small animals can fall prey to the same types of entrapments, entanglements and collisions that large animals can.

In the day of steel bumpers, this dog would have died on impact, but instead, was stuffed into the plastic bumper and rode there contentedly to the veterinary hospital.

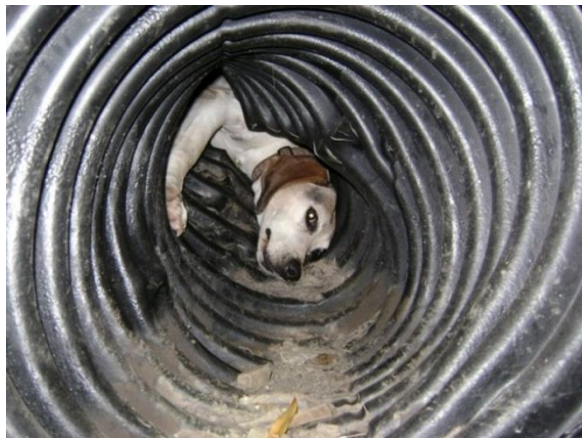


Photo Chief Bill Bullard

Dogs who are concentrating on prey may not realize what they are getting into. Their noses can lead them right into trouble. The head of this dog is shaped like an arrow, built to move forwards, not backwards.

ATR in a Disaster Setting

Imagine how complicated an ATR can be when it happens in the chaos of a disaster setting. Disaster amplifies the challenges. Some natural disasters happen without warning while others give sufficient warning for preparation and possibly mitigation.

- **Natural – Immediate / Pending**
- **Human-made**

Because of the more pressing needs of people during a disaster, first responders may be unable to commit to an incident involving animals. If they can respond to an ATR, they may have limited time. These incidents need to be resolved as quickly as possible. While many communities have disaster plans that accommodate animals and evacuation, fewer have plans that provide for the technical rescue of any of those animals that get into trouble. Pre-planning and training can improve the chances of an effective response.

Natural Disasters

- Immediate
- Earthquake
- Tornadoes



FEMA photo by Linda Westcott

This is an interesting scenario. Are there horses inside the trailer? Are there horses in the stable below the trailer? Are there people in the stable? Rescuers must consider all possibilities.

With an immediate disaster like this, the focus will be on recovery since it is difficult to anticipate what mother nature will deal.

While time is important, in many cases it will not be critical

- Access may be more difficult
- Resources may be scarce
- Hand-off may be challenging
- Long term care/logistics

With pending disaster, as in the case of hurricane, fire or flood, there is usually a chance of warning. Wildland fire especially claims the lives of many animals, especially those who are contained. Evacuation groups work with fire agencies to provide escape and shelter for all kinds of animals. Efforts must be coordinated to prevent impaction of roadways.

- Pre-Disaster response, shelter in place or Evacuate
- Pre-planning is a key element
- Organization of resources
- Time for ATR is limited
 - Danger is hours to days away
 - Time to bring in outside resources?



Photo by NPS

Resources may be taxed, and risk to respond may be high.

Pre-plan

Be prepared for disaster with recovery tools and technical skills in place.

- Identify potential problems, hazards, and secondary disasters
- Identify evacuation routes
- Identify shelter areas, consider animal types
- Identify long term needs

District familiarization and recognition of animal populations will make it easier to prepare for disaster response.

Training

A pre-plan should be backed up with training. The following courses are available, some without cost, and can enrich your understanding of animals in disasters.

- FEMA “Animals in Disasters Course”
- FEMA “Livestock in Disasters Course”
- ICS online training ICS 100, 200, 700
- AHA Basic Animal Emergency Services

Resources

Maintain a list of resources for ATR that are affiliated with a recognized agency such as a Fire Department, Animal Control, Search and Rescue and NGO’s (Non-governmental Organizations). Learn about and work with your local EVAC teams that can devote their time and energy to assisting with ATR, and lessen the impact on on-going operations.

Equipment Caches

ATR training is useless if there is no equipment or mechanism for delivery of skills and other resources. Find out what groups or individuals are willing to donate to your ATR effort. Establish equipment caches both local and regional and develop MOU’s for deployment.

Mutual Aid Agreements between Agencies

ATR may come under the jurisdiction of multiple agencies. Most of these agencies have a unique skill set or resources to offer to an ATR incident. Learn how to work together and learn what you all have to offer.

Human made disaster

Tragically, no part of our culture or society is immune from an act of violence. An attack can strike at anytime, anywhere, and they can include animal victims. Attacks that occur where humans interface with animals are difficult to plan for and make it essential that agencies



AP Photo Peter/Kemp/Corbis

have a network of resources to work with. The photograph above documents the results of a car bomb that was timed to cause maximum casualties to the Queen's Household Cavalry (her official bodyguard regiment) as they passed by for the changing of the guard. Seven horses were euthanized and 11 soldiers died.

Soft Targets



Photo Richard Lynch on the extreme left

Rodeos, parades and horse racing are all American activities and possible soft targets. Imagine the horror of the Boston Marathon with horses involved. Cavalry officer Richard Lynch says "...A parade is a soft target. In the case of the NH Governor's Horse Guards, we are always in close proximity to the Governor. On several occasions, the Governor has had other dignitaries such as the NH Congressional Delegation, US Senators and

Congressmen, in a group. The plain clothes State Police Security Detail and local politicians were often nearby."

Mounted Units have their own PPE as shown here by Scottsdale Mounted PD. Six of London's Metropolitan Police Horses were injured in a political rally in London during the "Million Mask" march. The Met's horses are outfitted in riot gear designed to protect them, primarily on the face, and legs. But several horses were seriously injured in this year's event by projectiles and fireworks.

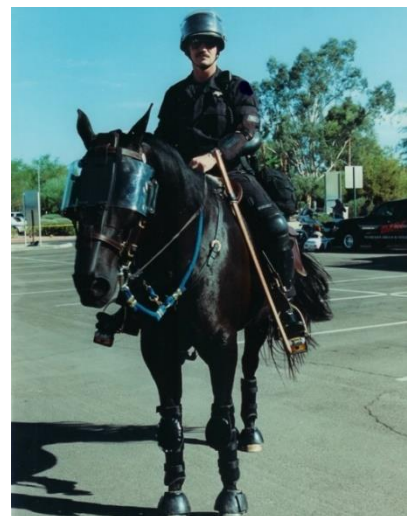


Photo Scottsdale Police Department

Disaster in the Food Industry

Disaster can come in the form of disease and it can strike animals in the food industry. Reinfections and disease can be spread quickly through numerous ways with delayed symptoms and long reaching effects.

- Separate animals from the herd quickly to limit exposure
- Communicable disease and biological threats can destroy the food supply
- Disease in wild animals has been demonstrated to infect food animals and then humans – Avian Flu

The food industry often has high density animal populations that might be vulnerable to disease. Some of these diseases can cross species to infect humans. In one example of agency/industry co-operation, a local fire department was requested to help “depopulate” a chicken farm that was infected with Avian Flu. The farmer needed the capability of the fire department to foam the chickens with a special chemical that put them to “sleep”.



Photo by Tiger Gang

Food industry animals are also vulnerable to natural disaster. Floods and fire can have catastrophic effects on animal populations. Loss to flood may be high due to immersion and contamination of flood water with sewage.

Some animals can find higher ground and survive a flood. The pigs and cow in the photograph



FEMA photo Andrea Booher

to the left seem to be coping well. In the case of a flooded central CA valley sheep farm, Modesto Fire Dept. fire fighters were called upon to help evacuate. The fire fighters were able to float sheep out of danger in cut food barrels. An incident like this may require isolation and decontamination of the animal victims due to unclean flood waters.

HazMat Incidents

Always consider the possibility that you may be responding to a HazMat incident.

- Move, isolate and decontaminate animals exposed to poisons, chemicals, disease
- Limit herd exposure
- Limit environmental exposure
 - Some diseases can survive for extended periods of time

Training for Disaster Preparedness

The following agencies provide training in disaster preparedness:

- U.S. Fire Administration
- FEMA
- WIFFS

This training can provide help to improve response and co-ordination of activities.

The **U.S. Fire Administration** has recognized the need to provide training for non-fire emergencies. Large scale disasters over the past few years offer many lessons learned. The U.S. Fire Administration has carried out “after- action” reviews that give valuable lessons and should produce change in operational behavior. This agency validates fire response to non-fire emergencies and offers the following courses.

- Operational Lessons in Disaster Response
- Geospatial Information Technologies
- Active shooter and mass casualty

FEMA offers

- IS – 10.A Animals in Disasters
- IS – 111.A Livestock in Disasters

National Fire Protection Association (NFPA) has established guidelines for Animal Technical Rescue Training.

The **Western Institute for Food Safety (WIFFS)** offers

- **DHS Loose Livestock, Injured Wildlife and Humane Euthanasia for First Responders**
- **DHS First Responders Guidelines for Equine Emergencies**
- **DHS All Hazards Planning for Animal, Agricultural and Food Related Disasters**
- **DHS All Hazards Preparedness for Animals in Disasters**

Disaster preparedness includes forming trained ATR teams that are able to perform technical response without impacting ongoing operations or, that can enhance operations.

USAR teams are best equipped and trained for this purpose if they can adapt their skills with a knowledge and understanding of animal behavior. For agencies that will respond in some way to disaster, establish MOUs and automatic aid agreements and work co-operatively with other responding agencies and NGO's within the NIMS system. Reimbursement funds may be tied to cooperative efforts within the NIMS system.

Chapter 3— Applying ICS/NIMS/SEMS to ATR

At the end of this topic, a student will be able to plan for an animal technical rescue by understanding the organizational system and resources for ATR within the context of disaster or single incident response, and will be able to describe challenges to these responses

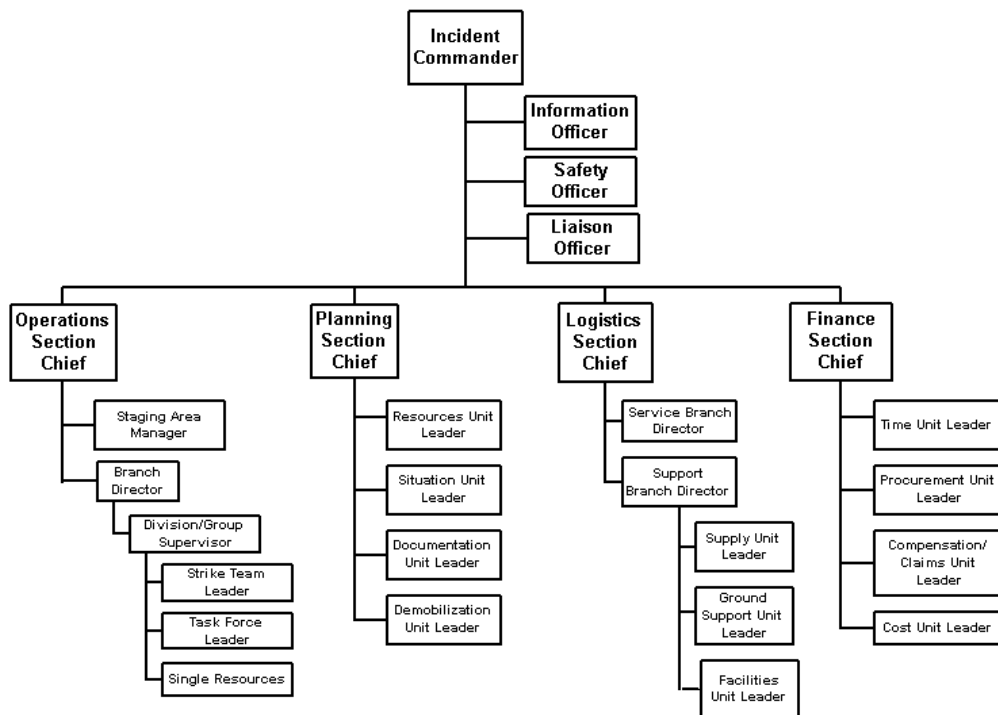
Animal Technical Rescues often involve a response by multiple agencies. This is especially true during widespread disaster. With multiple jurisdictions on an incident, the scene may be managed with a “Unified Command”. The foundation for a unified command lies in the development of the ICS System through FIREScope. FIREScope (Fire Fighting Resources of California Organized for Potential Emergencies) is a structured, cooperative effort involving multiple agencies having firefighting responsibilities in CA. It evolved from a Federal Grant in the 1970’s, following a sequence of disastrous wildland fires.



FIREScope

FIREScope is a good example of pre-planned procedures that explain operational standards and facilitate interagency cooperation. Firescope produces a Field Operation Guide or FOG that is the “bible” for ICS operations in California, and helps all responders to work with a common understanding. It is available at: www.firescope.org

The Standardized Emergency Management System (**SEMS**) and the National Incident Management System (**NIMS**) have established minimal levels of training for responders to an emergency event, depending on job assignment and the level of responsibility.



This generic ICS Matrix serves to help agencies function in spite of the chaos of emergency.

Affiliation and Rank in ICS



Always know who you work for. Personnel who are assigned an ICS position should be wearing vests, labeled with their title, so that they can be easily identified.

Affiliation and Rank are negated during ICS. A Firefighter may be the Incident Commander. One agency does NOT “work” for another agency. The “Operations Chief” works for the “Incident Commander” according to the ICS Matrix. A volunteer Firefighter might be placed in charge of a full-time Fire Chief. Don’t let egos get in the way. Especially for the unique ATR skill set, put the best person in the position, regardless of rank or affiliation.

FOG

The **Field Operations Guide** (ICS420-1), commonly referred to as the **FOG**, is a document published by **FIREScope**. It is an excellent resource that contains descriptions and duties for all positions, along with other valuable information. They are available online and via a smart phone app.

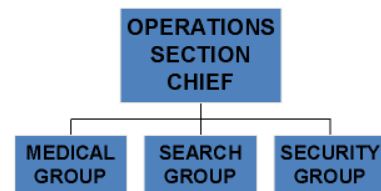


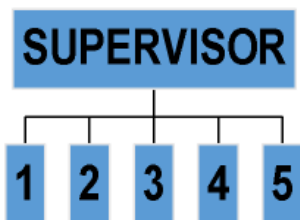
One of the principles of ICS is common terminology. This is important so that no matter what jurisdiction or geographical area you are, equipment and personnel can be requested anywhere with consistent results. The FOG has various charts that explain the specifics. ATR introduces a new vocabulary in regards to equipment and the animal patient.

Some resources may be ordered through **ROSS**, Resource Ordering and Status System. Certified personnel are placed into a database and may be requested through the ICS system. There are draft documents for animal-specific certifications like “Animal Handling Specialist” and “Animal Technical Rescue Specialist”. The future of ATR response is to have all personnel trained and certified, and to be included in the ROSS database for efficient deployment

Division vs Group

During a large incident, in order to maintain proper span of control, an incident may be divided. There are two ways an incident may be divided: geographically, or by function. If an incident is divided geographically, then it is broken down into divisions. You may use the geographical name, or alpha letters. Example: Division Alpha, South Division. Another option is to divide an incident into functional areas. Example: Rescue Division, Fire Division, Medical Division, etc.





Span of Control

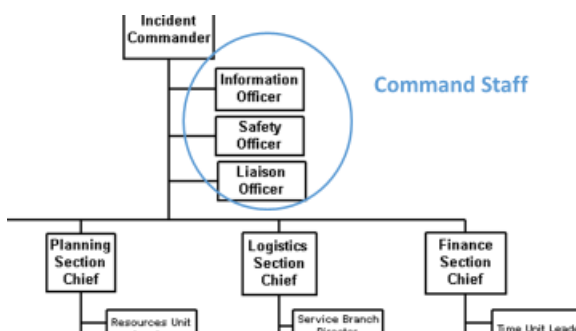
Maintaining span of control is critical when supervising individuals. The optimum span of control that most people can manage is 3-7 with 5 being the best. A fast-moving, complicated incident may lessen the number. A "routine" incident with an experienced supervisor may increase the number of people that they can oversee.

Common Terminology

Common terminology is an essential part of good communications. It's important to understand the difference between a **strike team** and a **task force**. A Strike Team is a combination of the same kind and type resources, with common communications and a leader. Example: 5 Type 3 Fire Engines, and a leader. A Task Force is a group of resources with common communications and a leader. Example: 1 Water Tender, 3 Fire Engines, 2 Utility Pickups, and a leader. Using Span of Control guidelines, both teams typically consist of five units and one leader. In a disaster or other large event, ATR responders may be operating under a Division or Group Supervisor.

Incident Action Plan (IAP)

Every incident has an Incident Action Plan (IAP), either formally written, or verbally stated. At multi-day incidents, these can usually be obtained at the morning briefings in either written or electronic form. It is common to have a QR Code posted at the Incident Command Post that personnel can copy. The IAP is a multi-page document that includes tactical objectives, lists of



activated organizational elements, safety plans, communications plan, weather and fire behavior reports if appropriate, etc.

The **Command Staff** consists of the Information Officer, Safety Officer and Liaison Officer.

There is always one Information Officer, sometimes referred to as the Public Information

officer (PIO), but there may be several Assistant Safety Officers, so be sure to coordinate, especially if there is a Joint Information Center (JIC). Dealing with the media requires training, experience, and the proper temperament for the job. Media should be directed to a qualified PIO.

"Everybody is a Safety Officer." It is easy to get tunnel vision during ATR operations, but an ATR needs oversight with an individual who is specifically working on just that task. A Safety

Officer must be assigned to look out for risky practice and other hazards for both the people and the animal. “If it Predictable it is Preventable”. Gordon Graham.

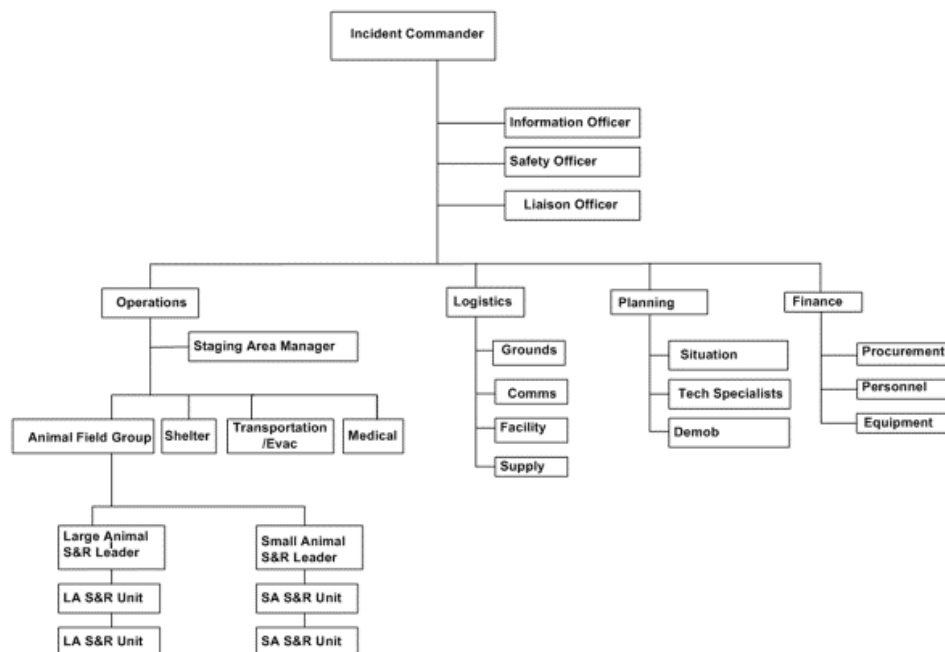
The Liaison Officer is critical during an ATR since there may be so many different agencies involved. During large incidents, there may be a daily meeting of all Stakeholders.

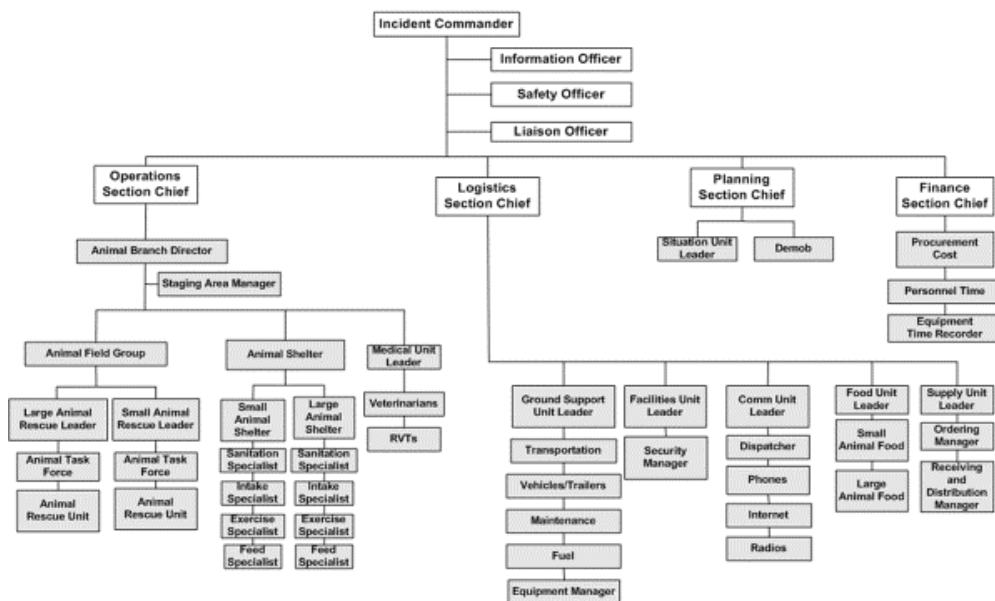
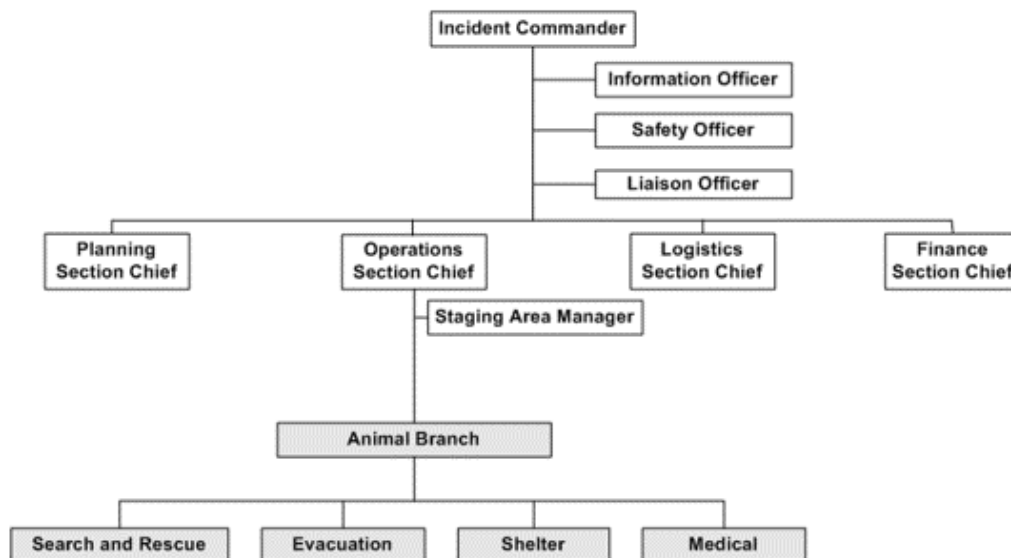
Plans: finds out what’s needed. Logistics: knows where to find it. Operations: gets it there.
Finance: determines how it will be paid for, MOU’s to cover any special resources and hand-off.
Ops: ATR works under Ops.

A typical ATR will have a compliment of Agencies Having Jurisdiction (AHJ) to fill these positions, including Animal Control, Fire Departments, Law Enforcement, Veterinarians, and possibly NGO’s (non-governmental organizations such as ASPCA, Humane Society, Animal Evacuation teams, and other volunteer groups).

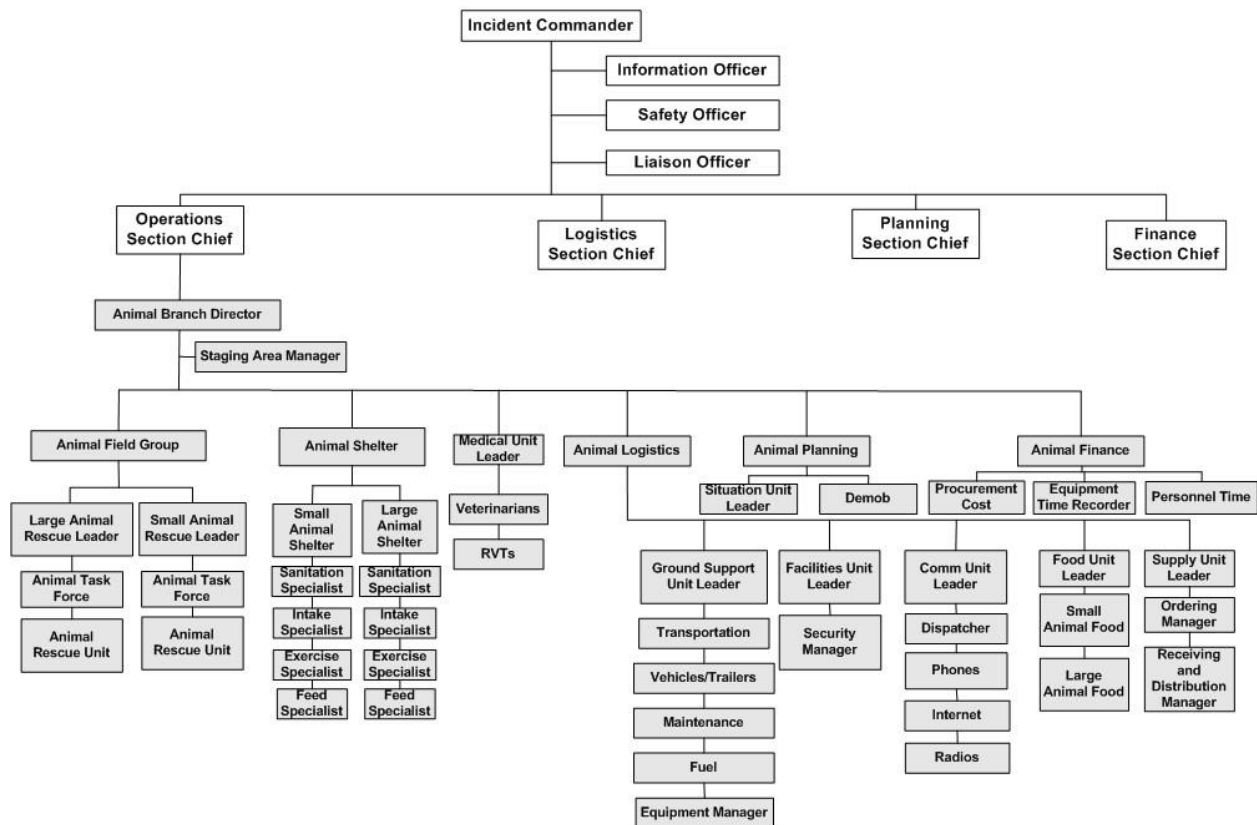
After Katrina, government agencies formed the National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP) Best Practice Working Group. These levels may be populated by professionals and NGOs.

Here are some examples of matrixes for ATR in a disaster.





Animal Protection ICS Matrix



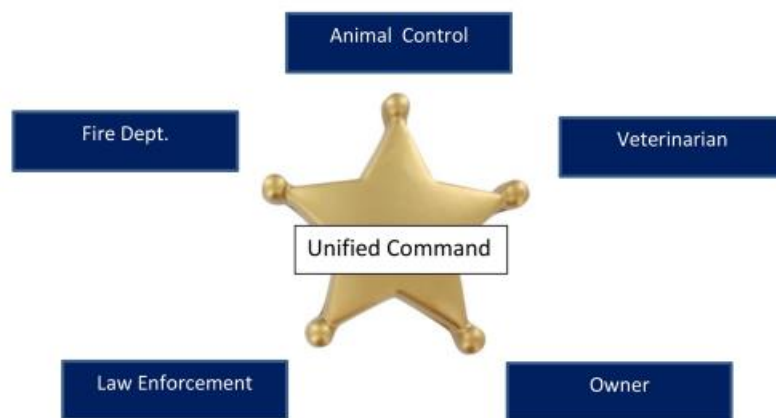
Single Incident ATR

In a smaller scale incident such as a trailer accident on the freeway, or trail accident in a state park, ATR responders will be operating under a direct Unified Command composed of Authorities Having Jurisdiction (**AHJ**). These are agencies have jurisdictional, functional, or geographic responsibility and may include Animal Control, Fire Departments, Law Enforcement, (including park rangers if appropriate, or highway patrol), Veterinarians, and the owner. This Unified Command will allow the agencies to work together effectively without affecting agency authority, responsibility, or accountability. The Unified Command allows the agencies to set common goals and work in concert with each other. Clearly the owner is a stakeholder and, if not too traumatized or injured, should be an active contributor to plan rescue strategy.

The veterinarian will charge for services rendered. **Pre-plan to ensure that the veterinarians on your resource list will bill the owner instead of stakeholders.** If the owner refuses to pay for veterinary services, Animal Services may have the legal ability to enforce veterinary care, pay for veterinary care, and recover costs from the owner at a later date. Humane organizations may have the ability to absorb veterinary costs. As a last resort, social media may

offer a different solution in the form of an appeal through websites such as [gofundme.com](https://www.gofundme.com). This concern must be addressed in advance, and supported with Memorandum of Understandings (MOUs) and established protocol, to avoid repercussions.

Unified Command



27

Use the owner's Veterinarian if possible

Owners can be very helpful provided they are calm and in control.

They are paying the bill and so their input is important.

Chapter 4 – Resources

At the end of this module, students will understand types of resources for animal technical rescue and coordination of those resources for single incident ATR as well as disaster and food industry contamination.



image Debra Fox

The same agencies that have jurisdictional responsibility for ATR are also a Functional Resource for an ATR incident. Agencies having Functional Responsibility include **Animal Control, Fire Department, Law Enforcement, Veterinarian** and the **Owner**.

Animal Services varies from county to county, but usually will have jurisdictional responsibility for ATR and be a Functional Resource for an ATR incident. In some areas, Livestock or Dept. of AG will assume this position. The AC Officer often has resources unique to animals and may be able to meet logistical needs in terms of caging, in the case of small animals, transport and sheltering. The Animal Services Officer will serve as the animal advocate if the owner is not present, or, if the owner is too distraught. If the animal has been put in danger because of owner neglect or negligence, the AC Officer has the capability to enforce with a citation. The AC Officer may have the ability to perform emergency euthanasia if the veterinarian is not available. The AC Officer also has tools specific for animal capture such as cat grabbers, snappy snares, and tools useful for application of ATR equipment such as snake tongs.



Photo Peninsula Humane Society

As mentioned previously, the AC Officer may ensure provision of veterinary care and may play a role in hand off of the animal patient following rescue to a reliable party.



Photo David Byerly, DVM

The veterinarian is the medical authority with the expertise and experience to monitor the animal patient through operations. The veterinarian is best qualified to assess the patient's medical condition and may have knowledge of patient history. The veterinarian can advise the unified command as to prognosis for the patient, how to manage the patient through operations, and can recommend optimal equipment applications. The veterinarian can treat injuries, administer sedatives, pain killers, anesthesia, antibiotics, and begin IV fluids for a good chance at rehab. And of course, the veterinarian can perform euthanasia. Though veterinarians may have a delayed response, you may be able to make contact via cell phone. The veterinarian is the best authority to determine the owner or agency to hand the animal

patient off to following rescue. Depending on injuries or disaster conditions, the animal may need follow up care at a veterinary clinic, or shelter at a disaster shelter, or may be safely returned to its owner.

The fire department is a primary resource for ATR incidents. The fire department has access to standardized ATR training that builds on existing technical skills such as swift water rescue, trench rescue, low and high angle rescue, and vehicle extrication. A department may also have a history of working cooperatively with other AHJs such as Highway Patrol, Sheriff, Park Rangers, Police Dept. and Animal Services. In addition to the many tools and equipment that fire engines and rescue trucks carry, the fire department also has capability to request additional resources such as heavy equipment, water craft, etc.

Equipment that the fire department can bring includes engines, rescues, utility trucks and all the equipment available in these units. In general, the fire department will have access to; rope and rope systems, hose, water, salvage covers, extrication tools, cribbing for stabilization, lift bags, generator, cutting tools, lighting and human harnesses.



Photo CAL Fire

The fire departments are familiar with establishment of a command post or base camp depending on the size of the incident. They are familiar with additional fire stations, maintenance yards and public works yards and the assets available in these locations.

The fire service may have access to resources like the CA State Department. Of Corrections' Fire

Crews. They may be able to carve a trail to make rescue in remote areas easier.

Law Enforcement will have jurisdiction, and may be first on scene. Whether an ATR is on the highway, county roads, city streets or on trails in state, county or federal parks, your law enforcement officer can bring order to the scene, and may be the first to request primary resources. Officers may assist with operations or help with traffic or crowd control. Some of these officers have animal experience and some are K-9 officers that may need assistance with rescuing their own partners.



Photo by Debra Fox



Photo by Gore/Baylor of Judith Ogus

The owner, is the person that is most familiar with animal. Remember that the owner is the person who is paying the bill and as such may decline the use expensive equipment, such as a helicopter. If the owner is not acting in the best interest of the animal, through debilitation of some sort, Animal Control may intervene.

Hand Off



Photo by Felton Fire

Begin early to consider animal patient handoff before your ATR is accomplished. Depending on injuries or disaster conditions, the animal may need follow up care at a veterinary clinic, or shelter at a disaster shelter, or may be safely returned to its owner. Protect your agency by following previously established MOU's where handoff is determined by the veterinarian or animal control officer and any associated costs are clearly understood and agreed to.

The horses, in the photograph to the left, have been handed off to the owner and veterinarian following

extrication from a trailer that went over the side of a local highway. They were able to walk home. In a different scenario, these horses might be loaded into an EVAC trailer and be transported to an EVAC shelter, or, be transported to an Animal Control Shelter, or veterinary clinic.

Equipment Cost must be considered before ordering special equipment. Who will be paying for this equipment? While large fire departments such as L.A. County F.D. or Ventura County F.D. may have their own cranes and helicopters, the cost to order a crane or helicopter from a private company may run into thousands of dollars per hour. An alternate may be to request equipment from a local gas and electric company. This is an excellent opportunity for good publicity. Farms and ranches often have tractors that be used provided the operators are competent. Search out possible equipment resources and enter them into your pre-plan with any associated costs clearly defined

There are several options for secondary resources, these include **NGO s** (Non-Government Organizations) NGOs that can offer emergency trained personnel familiar with the ICS and who may have animal experience, **SAR** (Search and Rescue) These may have rope knowledge, animal experience, regional familiarization, **Animal EVAC** (Animal Evacuation) - Animal transport, animal knowledge, animal sheltering, familiar with local animal populations, may know ATR, **MSAR** (Mounted Search and Rescue) and **Mounted Posse** - Personnel, with animal experience, and **CERT** (Community Emergency Response Team) - basic emergency training that can be expanded and can also be used for auxiliary jobs.



Photo John Maretti

Don't underestimate the value of local response groups or NGO's. The **North Valley Animal Disaster Group** in Chico, CA is an example of a volunteer NGO that is available to respond to animal needs whether disaster or small event. The team members are highly trained in ICS, water and boat rescue, helicopter operations, animal EVAC and animal rescue. They are a premier example of how a local group can support animal operations.

Food Industry situations require additional considerations. This response will depend on the type of animal involved, the industry involved, the transportation of the animals. Meat animals, vs dairy animals pose different circumstances. In these situations, a veterinarian must be consulted, depending on the situation destruction of the animal may be the best option to preserve the herd. Notifications need to be made and may include the following;

- Local and State Public Health
- Local and State Agricultural Dept.
- United States Dept. of Agriculture (USDA)
- Food and Drug Administration (FDA)

- Livestock Enforcement
- Brand Inspectors
- Food Safety and Inspection Service (FSIS) Centers for Disease Control and Prevention (CDC)
- Center for Food Safety and Applied Nutrition (CFSAN)
- Environmental Protection Agency (EPA)
- U.S. Department of Homeland Security
- Animal and Plant Inspection Service
- State Reserve Veterinarian Corps

The list is extensive and the veterinarian should be able to determine who needs notification.

Local Response Groups can offer considerable value. They at times are the first to respond, and first on Scene. They are familiar with available resources, how to access areas, who to contact and how to use them. They may also have knowledge of problem spots and individual animals.

Study the resources in your area and integrate them into your disaster and ATR pre-plan.

Chapter 5 – ATR Considerations for Evacuation

At the end of this module students will be able to identify the need for animal evacuations and the difficulties encountered. Evacuation priorities will be discussed and how ATR might be a part of an evacuation.

In any disaster situation, the primary goal is to save as many animals as possible. As with humans, the principals of triage are applied to animal groups to accomplish this. ATR may be a part of an EVAC but only if sufficient time exists to perform the rescue without negatively impacting the larger group. Uncooperative animals, such as those that refuse to load, may need to be left behind in order to facilitate the greater good. Attempts to save trapped or fractious animals should only be considered if sufficient time and resources exist after the larger group has been handled successfully.

EVAC is best performed by a previously established NGO, resourced through the command system by Authorities Having Jurisdiction. During large-scale disaster when resources are taxed, an NGO EVAC team can allow other agencies to focus on human issues by taking over the responsibilities of an animal EVAC. The EVAC team should have the capability to provide for the tasks of transportation, shelter and care.

The Fire Dept., Law enforcement, Animal Services, and veterinarians may be requested for animal EVAC, or may respond until an NGO group is available.

Examples of fire departments assisting with EVAC include Modesto Fire Dept., requested for the evacuation of sheep from a flooded farm, and Felton Fire Protection District requested for the evacuation of 80 horses from a flooded barnyard during El Nino storms.

The variety of responders helping to EVAC animals might be diverse. AHJs may find CERT groups, local equine clubs or animal owners on scene. Some of these include professionals with ICS training and proper PPE. But the bigger the emergency and the greater the sociological impact, the greater the possibility of “Convergent Volunteers” or people that just want to help out.

In comparison with registered Disaster Service Workers, convergent volunteers may mean well, but are lacking training and equipment to keep themselves safe and they don’t have the ability to fit into the ICS system. In his paper “Managing Volunteer Organizations in Time of Disaster” Brian McKay notes that “Part of the National Incident Management System (NIMS) requires the quick and accurate identification and verification of the qualifications of emergency personnel.”

The following matrix indicates how EVAC is implemented in the ICS system. Note that it includes trained ATR personnel. It may be used for pre-planning purposes.

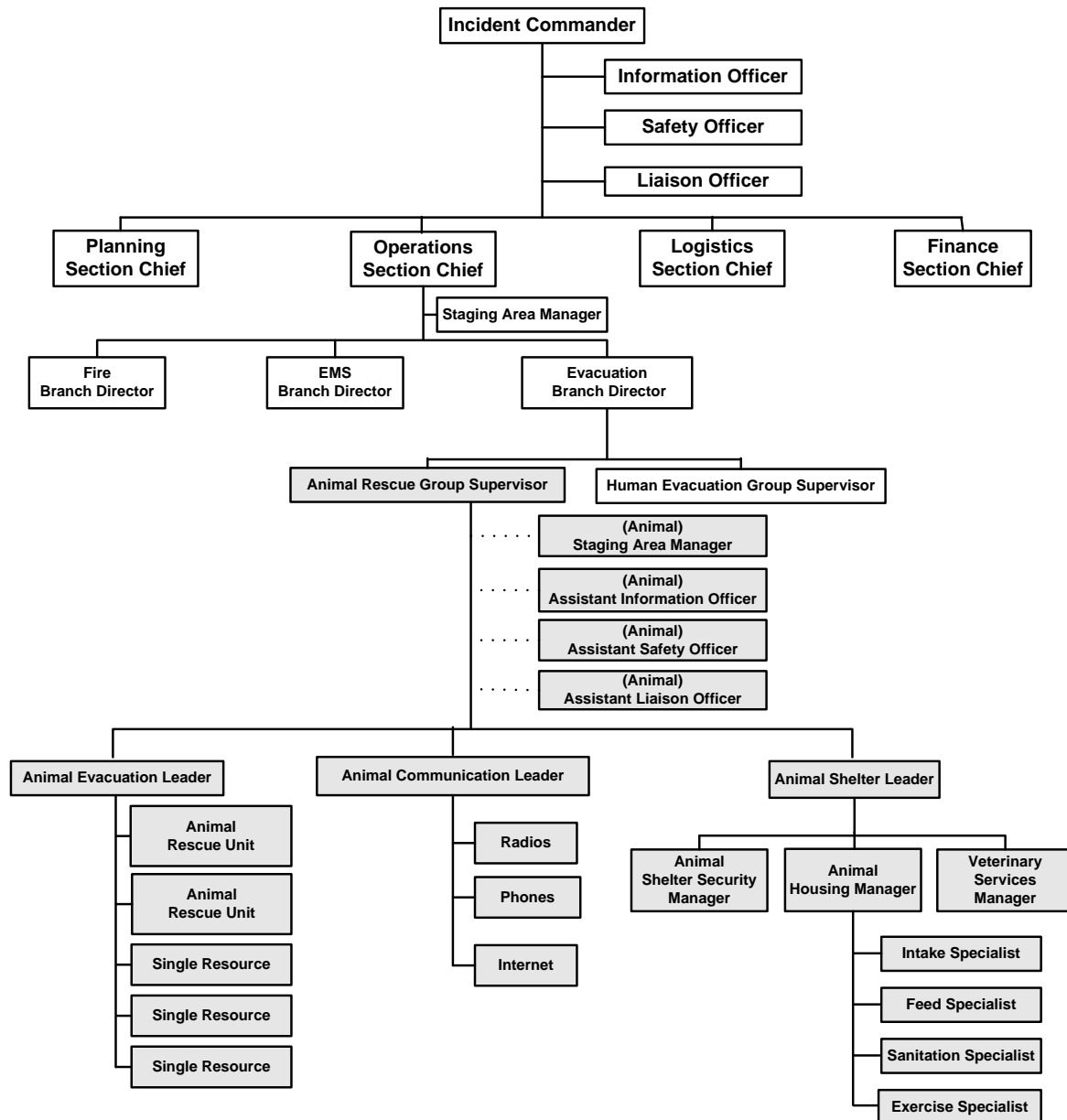


Photo John Maretti

Working in ATR or EVAC, you may be assigned as an individual resource or part of a Strike Team. When responding with trailers, it is good practice to have the Strike Team Leader in a smaller vehicle checking access before assigning units. You don't want somebody pulling a large trailer to get stuck down a small driveway with no way to turn around.

Possible Assignments include:



Photos John Maretti

- Shelter in Place
- Assessment
- Evacuation
- Medical
- **ATR!**



Disaster workers must work in teams of two or more.

Immediate disaster challenges are remembered by the acronym "LAST"

Locate

Access

Stabilize

Transport

Responders will need to use proper Personal Protective Equipment (PPE) the type of which will be dictated by the event.

ATR in a wildland fire:

Conventional Nomex pants, jacket, gloves, wildland boots and helmet.



Photo FEMA



ATR in a flood:

Swift water PPE with life jacket, HazMat-Level A-C Protection



Photo John Fox

ATR at a horse or livestock trailer wreck:

Full turnout or bunker gear, gloves, boots and structure helmet.

A **HazMat suit** might be needed for Animal DECON.

For off-road work with entrapped horses or large animals, USAR PPE with tight brimmed helmets offer protection but allow close contact with the animal.

Specialized ATR teams or personnel may be challenged by the conditions of evacuation. Elements like wind, rain, nightfall, smoke can all change the window of opportunity for ATR. Road closure may hamper access and responders need to be wary of wires down. Other equipment limitations and failures can make response difficult.

- In an EVAC, ATR is limited by time, resources & personnel
- Proximity to pending disaster dictates what can be done
- Carry out rescues with low impact on EVAC effort
- Set limitations (time, distance, etc.)

If you are going to evacuate animals, make sure that you have a place to take them. Utilize higher trained and equipped personnel to work in the disaster area and transporting animals outside of the road blocks, and have less equipped drivers shuttle the animals to distant shelters. Local pre-plans should consider the need for sheltering of animals in a multi animal incident.

Using a standard marking system will help responders to prevent duplication of effort and time.



Photo John Maretti

Here, animal rescue expert John Maretti marks a structure. Tracking the status of structures where animals are will help set goals for rescue. Make sure that your markings are separate from USAR markings for human victims. Here, he indicates the date, hazards and number of animals.

Radio Requirements

It is imperative that you have communications and can receive and communicate during a disaster. Frequently cell towers are not operating.

- Need frequencies for EACH Division
- Located in ICS 205 in your IAP
- Write down the frequencies for the adjoining Divisions
- Air Ops is a perfect frequency to monitor

Paperwork

Why is paperwork so darn important? Your documentation may be critical to reunite an animal with its owner. Documentation may help with liability. Document why you can't perform an EVAC or ATR. Provide proof of triage and document the status of the animals you work with. County, OES, FEMA, and the media all need statistics. These stats can help you with reimbursement funds and donations.

Remember that **LCES** is not just for fire. Be attentive.

L – LOOK –OUTS

C – COMMUNICATIONS

E – ESCAPE ROUTES

S – SAFETY ZONES



Photo U.S. Department of Agriculture

No matter what our PPE is, or how important a mission is, there are some places we cannot go...

Chapter 6 – Size-up

At the end of this module, students will be able to identify the different factors including safety issues involved in the size up of an ATR incident

First Size-up

Your first “Size up”, delivered over the airways with dispatch, gives you what Richard Gasaway¹ calls a “snapshot” to the brain....”2360 respond to a Large Animal Rescue for a horse that has fallen 125 feet over the side, or Rescue 2360 respond to Hwy 9, cross of Glengarry for a horse trailer over the side, 2 on board. Rescue 2360 respond to a “___ahma” stuck in a creek. A little white noise on the radio might leave you wondering, “Did she say llama? Or Brahma?



Photo John Fox Horse over the side Where's the Horse?

This snapshot should start you thinking about mechanism, injuries to the animal, and resources you will need. You may be thinking rope systems, and, do you have enough staffing? Can you get the CAL Fire crew to dig a trail, or are you going to need to close down Hwy 9 or start traffic control or depending on mechanism, are you going to a rescue or a recovery?

Extreme conditions and terrain especially can tax equipment and rescuer ability and attitude. Respond to needs quickly and be able to adapt as needs change. What are your limitations?

“Personnel should be adaptable to improvisation, but equally be aware of capabilities.....and limitations” *East Sussex Fire Brigade Operations Manual, Animal Services*

¹ Richard Gasaway “Situational Awareness starts with Size-up”
SA Matters.com

Second Size-up

Richard Gasaway says that your second size-up is like a movie with “a prolonged visual assessment” It is this assessment that helps you *develop your situational awareness* by seeing the hazards that you face. Hazards and conditions help set your parameters for operations.

In all events, we must develop common goals and strategy. Strategy is supported with tactics.

Strategy vs Tactic

Strategy: The broad goal or overall plan and is developed by the Incident Commander.

Example: Get the cattle out of the rolled over trailer.

Tactic: Specific actions on how the strategy will be accomplished and is performed by Operations.

Example: cut an opening in the roof, walk out the standing animals.

In the case of the horse over the side, we had electrical wires that precluded a helicopter rescue, we had geologically unstable ground and landslide rubble prevented hauling the horse back up the slope. The condition and attitude of the horse and owner indicated that if a trail was dug, the horse would trot out on its own power. A CAL fire crew was requested, the trail dug, and the horse trotted out.



As operations progressed, the size-up changed from a trapped horse to a loose horse headed toward Hwy 9. By placing the horse's buddy at the exit, and a loose corral of bystanders, the horse was easily contained.



Photo Linda Richmond

In an ATR, strategies are driven by the animal's behavior. Since we cannot talk to the patient we must be prepared for anything, including possible delay of the operation.

The prior organization of resources will lend success to goals.

Size up is a continual process that starts at dispatch. In an ATR we look at; what are you doing? What do you need?

What happens if you shelter in place?

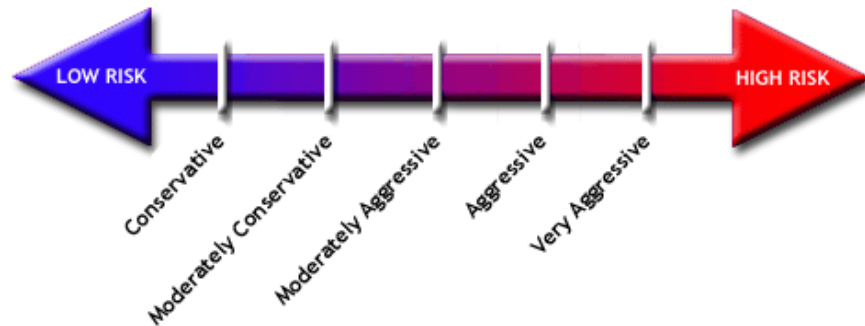
There are numerous factors that need to be considered including; weather, access to the incident, traffic on a roadway, personnel (number available and their training & experience), equipment available, daytime vs night (animals react different at different times of the day), rescue vs recovery (with a recovery we usually have a lot of time), severity of the injuries and the possibility of euthanasia, and most importantly priorities - human life vs animal.



Photo Allen Schwartz

Can you shelter in place? For an ambulatory animal, you have an option to bring it food and water, until you are able to free it.

How much risk are we willing to take for what gain? With high risk that cannot be mitigated, euthanasia is a valid option. Human safety and life come first.



Operational capability will depend on; location, proximity to danger, time frame, complexity of the situation and equipment and personnel available. For a horse patient that is down, horses can only be down for a limited time before crush syndrome sets in. You can buy more time by altering the position of the horse.

What is the animal capable of doing?

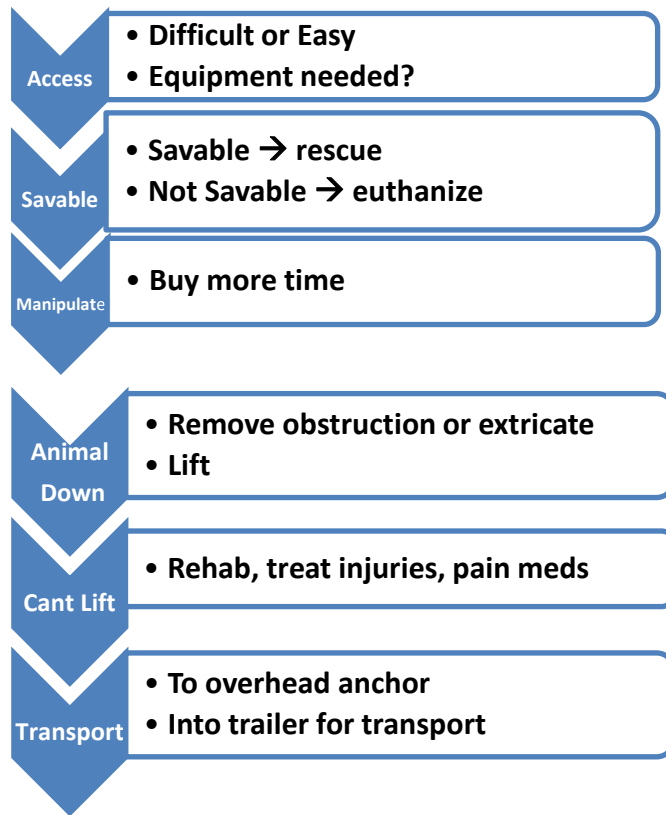


Photo John Fox

What will its condition allow? Can the animal stand and walk out or will it need to be extricated, lifted, assisted, or transported on a backboard? Animals have a very strong survival instinct and may at times attempt to do something that furthers the injuries. A horse will try to walk on a broken leg; an injured dog that is normally friendly may become vicious.

There are many factors that influence the operational decisions. Most of these factors are best assessed by the animal expert or veterinarian and addressed by ATR responders that can apply the rescue skills to help the animal.

Operational Decisions



Scene Management starts with the call to 911 and size up. The anxiety level of the scene may be set by the first on scene. This includes humans and animals. Horses, especially, are herd animals and will mirror the attitude of people nearby, like a yawn that is contagious.

ATR incidents are handled the same as a Haz Mat. Isolate and deny entry, consider a sheltering in place. Assess the situation, assess the hazards, accessibility, animal injuries. Request resources, special equipment and plan for “Hand Off” of the animal patient.

Have a plan for hand off to a reliable agent or owner to ensure that the animal will be given adequate follow up care. Establishing MOU’s ahead of time with animal services and veterinarians will ensure that the animal will have the opportunity for medical care on scene and after the rescue without misunderstanding about payment. Animal services may be able to take advocacy and collect reimbursement from the owner at a later time.

Chapter 7 – Responder Safety

At the end of this module, students will be able to identify the priorities, need for training and safety equipment to assure responder safety at an ATR.

Technical animal rescue is a low frequency, potentially high-risk event. As with any other rescue, rescuer and victim safety should be the most important considerations. If the risk is too high or the victim's prognosis is dim, euthanasia may be the only reasonable option. ATR responders need to:

- Be trained
- Be able to think on their feet
- Be able to adapt equipment and technique
- Be in proper PPE (Personal Protective Equipment)
- Be realistic
- Understand animal behavior and proper positioning (see Chapter 8-9)

Above all, **Be safe. THINK** before acting. Improper actions on the part of rescuers can result in a defensive reaction by the animal that can easily injure you, your fellow rescuers and/or the animal.

Untrained and unorganized personnel may take dangerous risks and pose a danger to others on scene through inappropriate behavior.

Rescuer safety starts with PPE, Personal Protective Equipment. This includes a rescue helmet (rimless USAR is the best), gloves (flexible and sized correctly), long sleeves and boots with tread for grip (no slick riding boots). In general, it is preferable to wear clothing that allows agility because rescuers may need to move quickly to stay safe. Consider wearing a wild land fire jacket and pants. Bunker gear or “turnout” gear can restrict movement; however, they should be worn for trailer accidents. A rimless helmet will allow close work without bumping the animal unexpectedly.

Consider bull rider helmets and vests. These helmets and vests are designed to take an impact. A bull rider’s vest is designed to reduce blunt force trauma.





USAR/search and rescue/water rescue helmets are also a good choice and allow close contact with the animal.

Civilians that are on scene may have riding helmets or bike helmets, but most will not. Any helmet is better than none, but bike helmets are not rated for trauma from the top side. Helmets must be securely strapped to the rescuer's head in order to avoid the potential of the helmet being dropped on or near the animal, thereby causing a potential dangerous reaction.





Photo Bob Schuett, Cpt.

These rescuers are preparing a horse for a helicopter lift using an Anderson Sling. This type of sling has many straps and buckles requiring dexterity on the part of rescuers. While gloves are a necessary part of ATR PPE, heavy, bulky types, such as those used in fire operations, may not allow the type of manipulation required during ATR events. Because of debris kicked up by rotor wash, eye protection is also recommended whenever a helicopter is involved.



Although this horse has been anesthetized, rescuers are still remaining outside the animal's 'line of fire'. Using proper PPE, appropriate ATR skills and chemical control administered by a veterinarian, rescuers were able to successfully extricate this animal.



Wildland PPE (shirts and pants, helmet, gloves and boots) is often adequate and provides for ease of rescuer movement.

Proper PPE, training, safe positioning, and an understanding of Animal Behavior will all work together to help keep you safe.

Chapter 8 – Animal Behavior

At the end of this module, students will be able to identify the pertinent animal behavior and characteristics of most common species and understand how this applies to rescuer safety. They will have an understanding of prey vs. predator behavior, approach to animals and potential hazards associated with flight or flight.

Your Role as a First Responder

As a responder to an ATR, you may be first on scene. Your presence, demeanor and actions will set the tone for the incident and proper actions and demeanor early on will result in a better outcome. Remember it is not your emergency, you are there to make it better, don't become a victim, **Be Safe!**

ATR responders need to:

- Understand animal behavior
- Understand equipment and limitations
- Understand resources
- Manage the scene

Human safety is first. If a rescuer does get injured, operation will need to pivot to human rescue and treatment, negatively impacting ATR operations. Human injuries are not acceptable. If the animal cannot be rescued without the likelihood of human injury, decline the rescue. However, keep in mind that owners will attempt to save an animal at great risk to themselves.

Safety begins with an understanding of animal behavior.

ATR incidents may involve any variety of animal in any type of habitat including equines, livestock, companion animals, wildlife, exotic animals, zoo animals, lab animals, and service animals. Basic ATR skills and concepts can be applied to any of these animals with species specific experts to help with adaptation.

Animal Behavior

Prey animals have highly developed senses for **protection** and use their senses to escape being a meal.

Predatory animals have highly developed senses for **detection** and use their senses to find a meal.

Smell, Feel, Sight, Sound all provide an accurate state of affairs.

Senses enable the prey animal to process information from its environment. Their sensitivity to outside stimuli is much more highly evolved than ours. If it is a known and accepted outside stimulus, then the animal will categorize it as something to not worry about. If it is a new stimulus, or the old stimulus in a new place, then this sensitivity could lead to life saving reaction.

A sudden sound, sight, or movement can trigger flight or fight.

Eyesight

The majority of a horse's site is monocular. By turning their head slightly, they can see much more, almost as much as 360°. Their acuity is not as good as ours. It is easiest for them to see movement and contrast. Thus, any activity within sight of the animal may signal a necessary or "life-saving reaction from them. Because of the side placement of the eyes, this panorama is mostly monocular, but it allows them a wide field of view to scan for foe or friend, and other life sustaining activities. *The trade-off for having mostly monocular vision is the loss of depth perception and the ability to judge distance and speed of on-coming objects or rescuers.*



Binocular vision is limited to a field directly to the front of the animal, where the eyes are able to converge. There are narrow blind spots directly behind the tail and under the chin.

Photos Bryan Krussow



Predator

vs.



Prey

Predator eye pupils are vertical giving them better up and down sight to catch gophers and birds. Prey animals have horizontal pupils giving them a wide, landscape view to watch out for predators.

What can the horse on the right see? Limited eyesight might make the horse more nervous and more reactive to sounds and vibrations.



Photo Monterey Humane

Ears and Hearing



Photo Bryan Krussow

Horses, mules and donkeys have 16 muscles that allow their ears to move independently to monitor the area for sound. Donkeys and mules have extra sound gathering capability! Triangulating the source of the sound may not be precise, but it will help the horse to locate the general vicinity. Expect the head to want to turn to confirm with the eyes what the horse hears.

Keep a low level of “white noise” on scene and avoid sudden, startling sounds. Introduce new sounds from a distance and gradually move closer. Example: a chain saw.

Ears are also expressive and a good indication of attitude. Most horses will give a fair warning

before action. If you see the ears go back, pay attention and stop what you are doing unless you are an experienced handler.

Photos by Bryan Krussow



Howdy!



I wouldn't if I were you!

Smell



Photo FEMA

Prey animals have a highly-developed sense of smell. They have the ability to remember smells and associate those smells with bad or good experiences. Unfamiliar smells may cause apprehension, fight or flight.

Rescuers must be careful when new smells are introduced such as the smell of smoke from flares.

Tactile

Horses are equipped with a blanket of nerves that reach nearly every part of their body. This makes them very tactile and sensitive to vibrations. They can feel vibrations through the ground of oncoming foot traffic. But this same nerve blanket can make horses vulnerable to nerve damage from being down too long, or having ATR equipment bind them for too long.

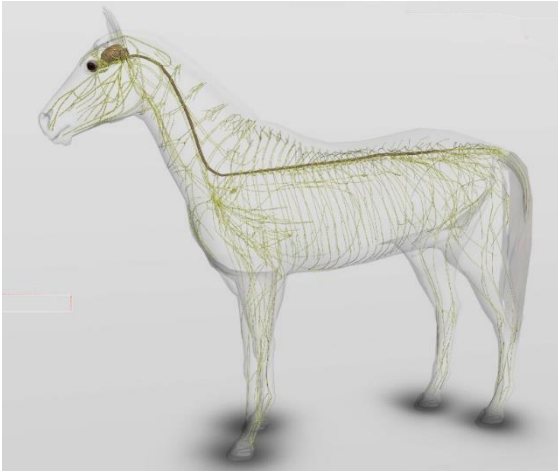


Photo Biosphere

Reassure the horse through calm strokes, not pats. Monitor equipment applications to ensure that strapping, slings and packaging are not compromising nerves.

Animal Behavior

Horses

Most ATR incidents involve horses. Horses are flight animals and will flee when a threat is perceived. They are quick to defend themselves with biting, kicking and striking, but are generally domesticated and tolerant of humans.



Donkeys (Burros)



Photo by Kristen St. John of Pericles, who "starred" in Shrek

Donkeys are not quick to flee. More *Photo by Debra Fox* intelligent than horses, when faced with a threat they are more apt to freeze, analyze the situation, and go into fight mode. They are quick to defend themselves with biting, kicking and striking.

Donkeys are stoic and often hide their pain. By the time you notice their condition, it may be serious. They do have tremendous ability to recover

Mules



Photo Bryan Krussow

Mules are hybrid and a cross between donkeys and horses. They have the same self-preservation instincts as horses. They will defend themselves with biting, kicking and running. Their aim is always impeccably perfect. Unpredictable and complex, mules never forget, and rarely forgive. Tom Dorrance says, "...a mule is like a horse, but more so."

Llamas and Alpacas



Photo Bryan Krussow

calm them down.

Llamas and alpacas are sensitive to heat and tend to lie down when stressed. They do not like to be handled or stroked and will kick, bite and spit to defend themselves. Some of them are quite friendly, but others might be aggressive. Animal expert Mike Nevis suggests squirting a llama with your water bottle first to show the animal that you are more aggressive.

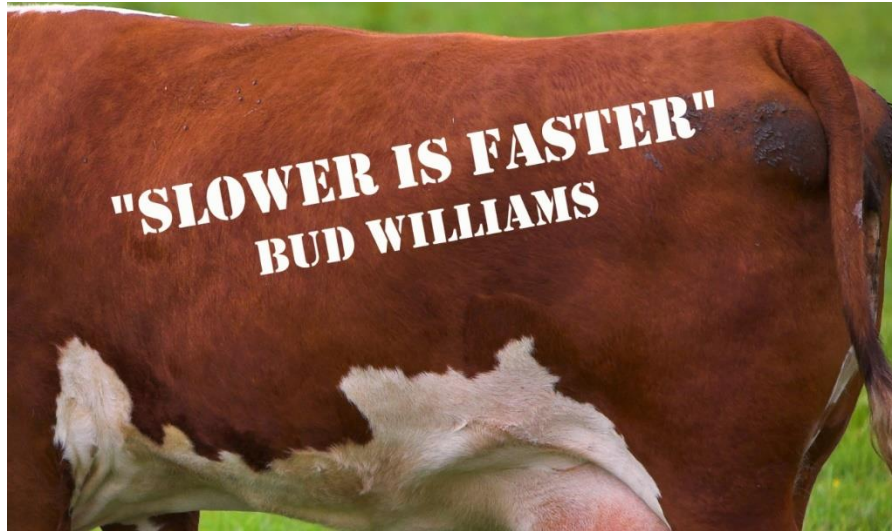
Llamas and alpacas will generally tolerate blindfolds or pillowcases and that might serve to

Cattle



Photo Eddie Yates

Cattle in general do not like to be handled. Dairy cows are tamer because they are handled more often by humans than beef cattle, and they may be more compliant in rescue, herding, and handling. If they are put on the defensive, cattle will kick and use their heads as weapons. If a cow panics, it will take a long time for them to settle down. Nicely herded up, with all of them facing the same direction, moving cows slower is faster. They will stampede if frightened.



Pigs

Pigs are loud and they bite when angered. If they are not trained, rescue can be difficult. When pigs overheat, cool them gently with a light spray of water to avoid over cooling. Pigs are usually herded with a stick. If you need to herd one or more pigs, it's generally more effective to hold a panel, such as a Slip Sheet, Glide or piece of plywood in front of you and use it as a "movable fence" to guide the animals.

Wild Animals

Wild animals may be unpredictable and dangerous. In most jurisdictions injured wild animals cannot be legally rescued, and responsible agencies let nature take its course. A game warden, ranger or vet is needed to determine if anything can be done and to what extent. If a rescue is legal, a vet should be able to evaluate and tranquilize the animal, it should then be no more or no less hazardous to handle than any other large animal; if you are asked to help and feel it's safe, appropriate rescue methods may now be performed under the close supervision of the game warden. Protocols should be:

- Do not approach or handle
- Secure the scene
- Call Animal Control
- Call appropriate Dept. of Wildlife, wildlife rescue if possible

Wild animals will often not be able to be saved.



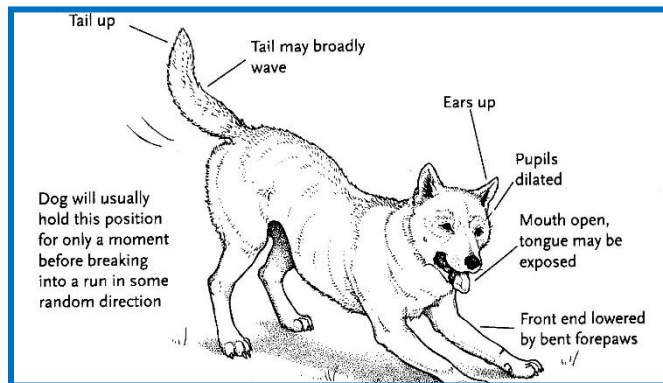
Photo NPS

Dogs

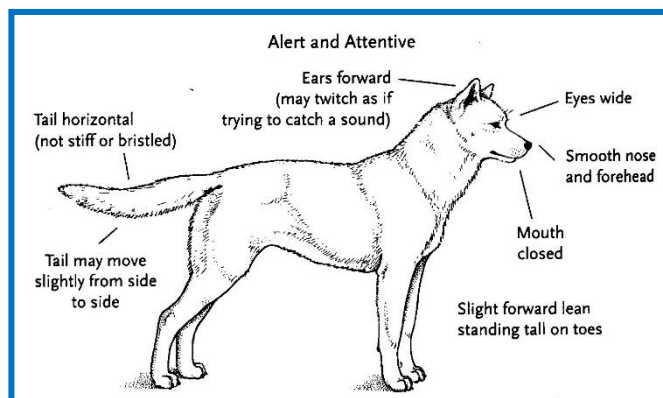


The greatest challenge to technical rescue of dogs is the great range of temperaments, size, and body types. Do not approach or handle if you are not experienced. Your greatest resource is Animal Control. While many dogs will be approachable, others may be frightened or aggressive.

Understanding a dog's body language will help to determine the best way to approach the animal. Behavioral cues are reflected in the animal's facial expressions (such as the barring of teeth), head and body position, as well as ear and tail position, and possibly vocalizations or sounds.



A playful dog will have his ears up, pupils dilated, mouth open and tongue may be exposed. The front end will be lowered by bent forearms. Tail will be up and may broadly wave. The dog will usually hold this position for only a moment before breaking into a run in some random direction.

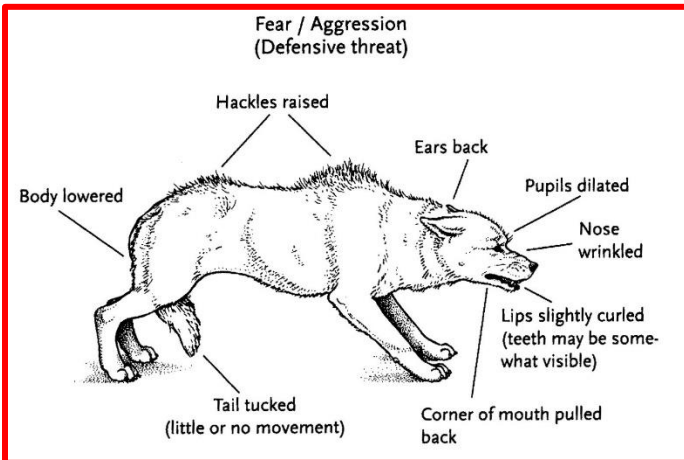


An alert and attentive dog will have ears forward which may twitch as if trying to catch a sound, eyes are wide open, the skin of the nose and forehead is smooth, and the mouth is closed. The dog may be leaning slightly forward standing tall. Its tail is horizontal, not stiff or bristled and may move slightly from side to side.

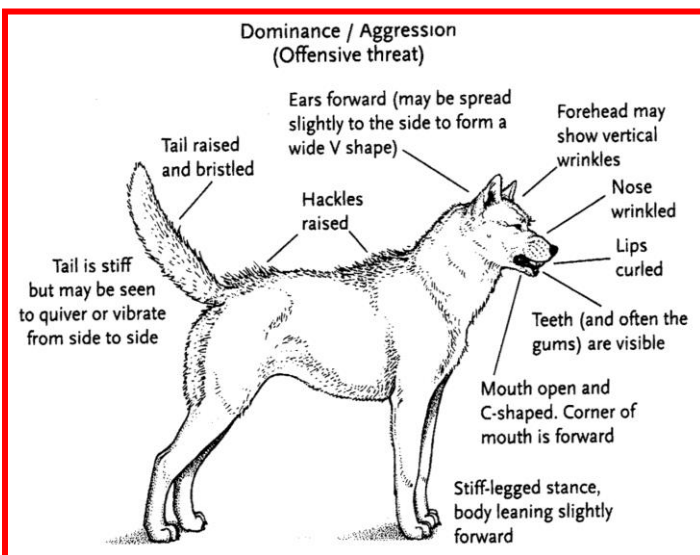
Dogs displaying playful or attentive mannerisms should generally be approachable. [These graphics show the body language postures for playful and alert and attentive dogs. Photo source: Federal Emergency Management Agency (FEMA) Community Emergency Response Teams (CERT) Animal Response Module II]

<http://www.fema.gov/community-emergency-response-teams/training-materials>

In contrast, a dog that is fearful or aggressive, will display much different body language. Many animals in disaster situations will be frightened or aggressive, especially if the dog is protecting its home or property. Dogs showing either of these behaviors should only be approached by an expert dog handler. A dog in either situation may act aggressively towards responders in emergency situations



A dog that is fearful (shown in the left illustration) will have its ears laid back against its head, the pupils will be dilated, and nose wrinkled. The corners of the mouth will be pulled back with lips slightly curled and teeth may be somewhat visible. The dog's body will be lowered and the tail is tucked between the hind legs with little or no movement. Hackles – or fur on the dog's back - are raised.



A dog exhibiting an aggressive posture (shown in the right illustration) will have its ears turned forward to form a wide V shape. The dog's forehead and nose will be wrinkled up. The dog's mouth will be open, lips curled and the corners of the mouth will form a C-shape. The teeth and often the gums are visible. The dog will have a stiff-legged stance, with its body leaning slightly forward. The tail is stiff, raised and bristled and may be seen to quiver or

vibrate from side to side. The dog's hackles (or fur on its back) will be raised.

Chapter 9 – Managing Loose Animals

At the end of this module students will learn the potential need for the management of loose animals on the scene of an ATR with respect to public safety. Students will understand the concept of reading animal behavior, flight zone, different containment methods and herding operations.

Herding cats

Wiktionary, the free dictionary.

Herding cats may refer to:

- An [idiom](#) denoting a futile attempt to control or organize a class of entities which are uncontrollable or chaotic

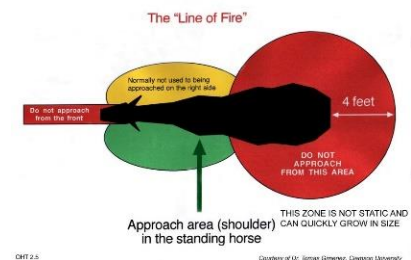
We can imagine the futility of trying to herd cats, a task nicely conquered by cowboys in the YouTube “Cat Herding by Fallon for the company Electronic Data Systems.

But herding loose livestock on the roadways can seem like cat herding if you are not knowledgeable about how herds move and what inspires them to move. The herd offers detection of predators with many pairs of eyes for flight, and impressive capability for fight.



The herd behavior depends on the reactivity of the herd members. Each member has a personal space that defines how close a friend, foe, or threat can approach. This personal space is called the “flight zone”.

The flight zone is dynamic and can change according to urgency or fear. The edge of the flight zone could be within hands reach, or it could be 300 yards away. Triggers can be the intrusion of a loud sound, a startling sight, or an unfriendly or unfamiliar person. All of these are suspect as life threatening until proven safe. The farther the threat intrudes into the flight zone, the more pressure it will put on the prey animal and the more apt it is to trigger flight. If the animal cannot flee, it will fight. **After all, the prey animal is food for predators.**



CHT 2.5

Courtesy of Dr. Tomas Gimenez, Colorado University

Diagram Tomas Gimenez



The Happy Gardner Milling



The Happy Gardner Stampede

Gaining Containment of Multiple Cows or Horses

Prey animals such as cattle or horses intuitively seek the safety of the herd whether that is a couple of animals or a large number. Now, instead of one lone target, and one flight zone, the predator is faced with many moving targets. As a predator approaches the herd, then circles the herd for a victim, the herd begins to bunch for protection. As the predator continues, the herd will respond to the increased pressure with “milling”, or random movement. The different color patterns and swirling movements of the members make it difficult for the predator to pinpoint “lunch”. With still more pressure, the strongest member or leader of the herd may choose an escape route to flee and the others will follow.

With studies and experience, Temple Grandin and Bud Williams have raised herding to both an art and a science. In her article “Low Stress Methods for Moving and Herding Cattle on Pastures, Paddocks, and large Feedlot Pens”, Grandin distinguishes between tame cattle, and wild cattle who have a large flight zone. She finds that tame cattle can “be moved easily by leading them”. They could possibly be lured with hay. Williams’ techniques work well with wild cattle because he is adept at instigating a level of anxiety in the herd that causes them to loosely bunch. He does this by working off the flight zone as a predator would, walking quietly in an arc similar to a giant windshield wiper blade. It can take several passes back and forth to cause the herd to bunch. Once the herd is loosely bunched, the herders can move the herd by applying more directional pressure. Too much pressure can cause the herd to stampede!

Cows and horses can read us like a book!

Bud Williams advises.....

See everything and look at nothing

Let the cows initiate movement

Allow the slowest cow to set the pace

Slower is faster!!!!

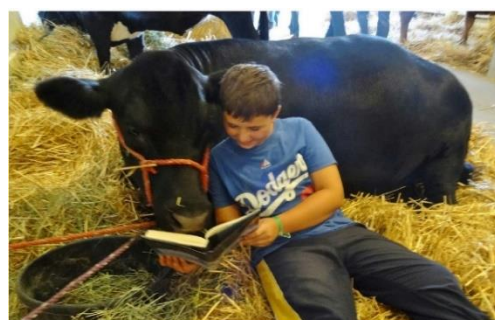


Photo Lucas Homan

Reading a steer....by Lucas Homan



A calm steer



An alert steer



Ready for flight or fight



A scared steer



A steer on high alert

Reading a horse.....



Calm horse



Alert horse



Agitated horse, ready for flight or fight



Flight

A change in your position or body language may help the animal to calm down.

ATR in the context of an ATR

Vehicle accidents, fire, and other disasters may cause animals to escape from confinement. In some cases, free-roaming animals pose a danger to themselves or the public, particularly if near roadways. Here are some of the variables to consider when determining the most appropriate response:



Photo Joseph Fox

- During on-road incidents, options for containment include people, vehicles, barrier tape, rope, hose, or other. If appropriate and available, set up traffic control to slow and redirect oncoming vehicles.
- Determine if there is a suitable fenced area nearby to contain the animals. Locate the gate. Check that the fencing is intact, no openings or broken sections.
- To move the animals, a group of people and vehicles, or combination thereof can serve as a “movable fence” to send the animals into the desired area. Most herd animals will respond to being herded in this manner:



Containment of loose animals has several options depending on the situation, location, resources available and the animal type. If there are only a couple animals – catch, if there are a number of animals – herd and contain. Containment will vary for types of animals. Animals may be confined to an area or lured or herded to containment. Above all DON'T CHASE. Simple containment can start with vehicle placement, a human fence, caution tape, fire hose, or rope. Consider vehicle placement on scene. Placement in livestock trailers can be containment. When herding loose animals, remember the flight zone. Stay back, don't chase, try herding slowly. Establish a human fence. If possible extend or augment the human fence with caution tape or rope. If available use panels – pre-made pipe, construction fencing, cyclone fencing, etc. When using movable fencing or rope, position rescuers where they will not get hurt or dragged if the animals challenge the barrier.

Catching a horse or cow is all about convincing the animal that you can offer support, leadership and safety. For the best chance, **note the edge of the flight zone**, the animal will notice you by twitching an ear, flashing a tail, or lifting its head, **pause at the edge of the flight zone**, present yourself confidently, honestly, and respectfully. As Bud Williams would say, **“keep your eyes soft, see everything and look at nothing. Slower is faster.”** Since most horses have some experience being haltered and led with a lead line, your chances are good that you will be able to catch the horse.

The key point to remember as you’re haltering a horse is to keep their head turned toward you. As long as the nose of the animal is tipped in your direction, movement will cause the hindquarters to move away from you.

CAUTION: If the horse tips his nose away as it’s moving, the hindquarters will come toward you, which can result in you being knocked down or kicked. **TO REDUCE YOUR RISK OF INJURY, KEEP THE HORSE’S HEAD TIPPED TOWARD YOU AS YOU APPLY THE HALTER.**



Key points:

If you don’t have a halter you can use a 20-25’ length of dynamic or swift water rope or 1” webbing to create an “Emergency Halter” that fits any size animal:

1. Create a small loop, or “eye” in the end of the rope or webbing, 1”-2” in diameter. A Figure-8 on a Byte works well for this, or an overhand knot.
2. Organize the rope in your left hand, flaking (not coiling) it, accordion-style
3. Approach the horse at the left shoulder, keeping your hands quiet as you walk. **(Moving both your hands and feet**



at the same time tends to drive the horse away.)

4. When standing by the horse, reach your free right hand over the base of the neck. If the horse starts to turn his head away, you can press fingertips into the right side of horse's neck to encourage him to stay tipped toward you.

5. Reach your left hand, which has the rope, under the horse's neck, and transfer the pre-built loop to your right hand.

6. Draw the loop end of the rope over the horse's neck. You now have the rope around the horse's neck, and can draw it toward you maintain control.

7. Feed the middle part of the rope through the loop, forming a second loop.

8. Place the second loop over the nose.

9. Snug the two loops up so they fit the horse securely.

To release the horse, slip the noseband off and pull the lead rope section toward you; this causes the rest of the halter to drop away.



Key point: the nose band must be pushed above the cartilage to solid bone support

Horses are obligatory nose breathers and must be able to expand their nostrils.

Leading



Most horses are handled on their left side, so ideally you should lead from there. Be at least arm's length away from the animal, with about 2-3' of lead line between your right hand and the horse's head. DON'T hold the lead rope under the horse's chin, as this puts you unnecessarily close, and can cause the horse to feel over-confined, and increases the risk that you'll be stepped on or run over, or pulled up in the air. Ideally the horse travels with its head in line with your shoulder.

Releasing

When you're releasing a horse or other haltered animal, be sure their head is directed toward an open area, where they can move away in a straight path. DON'T have the animal facing the fence or gate when you remove the halter, as this requires the animal to move to the side, and in turning, the freed animal is more likely to collide with you.

Managing Dogs and Cats

Approach



Photo Mike Ellison

There are many similarities when approaching small animals and large animals during rescue operations. Some of these similarities are that it is best to work in teams of two, slower is faster, and the concept of the flight zone.

When approaching a dog, it is best to let them see and hear that you are coming. Rescuers should try to act the opposite of a predator when approaching a dog or cat. Rescuers should turn their body to the side and look at the animal from the corner of their eye. The rescuer should approach the flight zone in a zig-zag pattern to release the animal's

tension. Once the rescuer enters the flight zone then he/she will take one step back and wait until the animal relaxes. Once the animal relaxes then the rescuer can try and move a little closer. It is also a good idea to talk to the animal and toss treats to gain the animal's trust.

Remember that the animal is reading the rescuer's body language as the rescuer approaches. Because of this, it may be good to kneel down so the rescuer is not hovering over the dog, which could be interpreted as an aggressive posture by the dog. There are also some PPE and/or clothing that may make it difficult for the animal to read the rescuers body language. Some of these items may include sunglasses, hats, helmets, clothing that may make noise (like a waterproof jacket or Tyvek). Some animals may react better to certain people such as men, or women, or people without beards, etc.

Note: Predators approach facing directly at the prey. They will take their time to quietly move into position before they attack the animal.

Escape Route

It is important that rescuers have an escape route and/or plan if something goes wrong during the rescue. They need to be sure that the dog or cat does not get between them and their way out of the area.

It is also important that the animal have an escape route. If rescuers cut off the dog's escape route then they leave the dog with the only option of fighting which can be dangerous for the rescuer. Cats will create an escape route if necessary which may include climbing over the rescuer (literally).

Dogs on chains, yards or house

Approaching a dog in his/her territory can be a difficult situation. There are many times that an animal may have an aggressive posture if rescuers enter the dog's house, yard, or area within the perimeter of a chain. Rescues in enclosed spaces within a dog's territory should be left to more experienced rescuers if the animal growls, barks, or has an aggressive posture.



Photo Joseph Fox

Slip Lead

Slip leads are one of the most versatile tools when working with dogs. Although there are various types of slip leads, they can fit dogs of all sizes.



Slip leads work off of friction. Most commercial slip leads are a piece of webbing with a handle, and on the opposite end is a d-ring.

To create the slip lead, make a bite in the webbing and put it through the d-ring to make a loop. Forming a choker.

Now put the loop over the dog's head.



To tighten or cinch the slip lead, pull the webbing towards the d-ring (should create an acute angle). This should tighten the slip lead, but if the webbing is pulled the opposite direction it will allow slack.

Ideally the slip lead should be up near the dog's ears.

Note: There are other guidelines for using a slip lead for dogs that walk in a heel position, but



most rescue animals are not leash trained to walk on the left side of the person.

Note: DO NOT use slip leads on cats.

A simple muzzle can be tied from a soft web or gauze.

Form a loop and overhand knot over the muzzle.



Place two or three additional loops around the muzzle, cross under the neck.



Tie off behind the neck.

Photos by Tim Perciful

Chapter 10 – Trailer Operations

At the end of this topic, a student, given structural and damage characteristics and potential victim positions, will determine the access and egress points of a common horse or livestock trailer, and use existing entry and exit points as identified, so that considerations and established procedures for victim extrication are applied while protecting stability of the trailer.

Accidents involving livestock trailers will generally involve multiple agencies that are able to deal with the human, animal and bystander/traffic situations that are typically present. As always, scene safety should be the primary consideration. People that come across a horse or livestock trailer collision have a tendency to open the doors, allowing loose animals to escape. A loose animal in traffic poses a significant public safety problem.

Horse trailers that are not hitched properly can jump off of the ball when challenged by a sharp turn or swerve. This accident illustrates many of the problems encountered during livestock trailer accidents. In this case, the trailer was improperly attached to the tow vehicle and became disconnected when the vehicle turned. As is often the case, the owner and bystanders immediately opened the doors, managing to remove one animal via the side 'escape' door



(designed to be used by people, not animals, during the loading process), whereupon the horse fell into the nearby ravine. The second animal remained in the trailer, unable to stand. This accident required two separate rescues. In retrospect, it was lucky that the first 'rescued' horse did not escape from the scene into traffic.

Photo John Fox

On scene, it must be safe to be there, thus using the same walk around technique that is employed at a structure fire is used. Walk around the scene; identify potential problems, access points, hazards and resources. As with a structure fire where we “secure the utilities” we must do the same with a trailer or any other incident. Look for fluid leaks, propane tanks, batteries, etc. and secure them. Failure to secure these “utilities” places all in danger. Check the trailer for stability and crib it if needed.

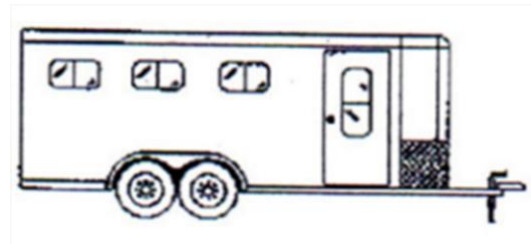
There are four basic types of animal trailers, **bumper pull, gooseneck, tractor-trailer transports and standalone vehicles**. In the United States bumper pull, gooseneck, tractor trailer transports are the most commonly used trailers. The “standalone” version, where the animal compartment is permanently attached to the vehicle, is more common in Europe.

Within these trailer types there are three basic configurations, **straight load, slant load and stock**. The location of “tack rooms”, where riders keep their saddles and other equipment, will vary between trailers, or, they may not exist at all. The design of the trailer will dictate options for extrication.



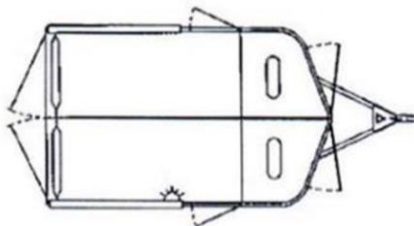
Photos Logan Trailer

Bumper pull slant load trailers are the most common type of animal transports used in the United States. These trailers are more prone to rolling over in an accident than the gooseneck or tractor-trailer transports.



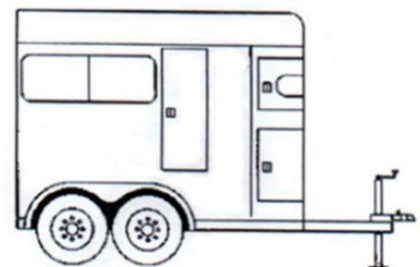
The number of windows on a trailer only indicates what the trailer was designed to hold. Three windows indicate that the trailer was designed to haul three horses. But never assume that that is what is inside!

Slant load transports are the most common transports in U.S. today. They can range from two animals to upwards of 14 animals. Sometimes these animals are packed in the trailers in alternate head to tail arrangements. These trailers will come in numerous different configurations, however the vast majority will be rear load and unload. There are also rear load side unload and front load rear unload, where the animals are loaded from the front and face to the rear as opposed to facing forward.



Straight load trailers are generally going to be smaller bumper pull trailers designed to transport two animals.

Photos Logan Trailer



There are some exceptions to all trailers and with straight load trailers there are configurations

for two to twelve animals. A 2-horse configuration is the most common. In the four and six animal trailers, the most common configuration is with two or three animals facing forward and two or three facing rearward. In general, these will also be a side load side unload.

A more expensive looking trailer might have more safety features for the horses like recessed latches and gussets at the back door.

Goose neck trailers are more stable than bumper pull trailers. While a bumper pull trailer will roll over more easily, a goose neck trailer is more likely to “jack knife”. Stock trailers are a simplified trailer that is very common in rural areas. They are primarily used to transport cattle and other food animals. They may have wall dividers where loose animals can be placed into separate compartments. It is common with these trailers that will have a mixed load, horses up front and cattle in back.



Photo Logan Trailer

Stand- alone trailers usually have living quarters in the front, tack room in the middle, and two horses in the rear.

Photo Logan Trailers



This front load, rear unload type of trailer is not very common, but here the small size of the doors could complicate extrication.

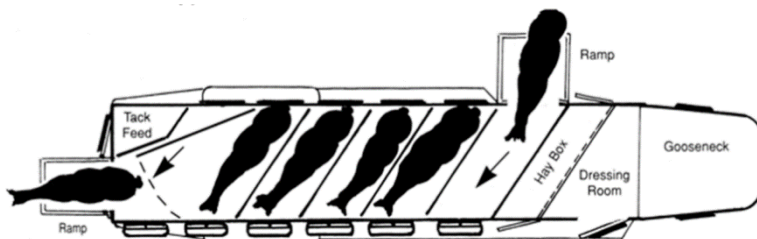




Photo Soleil Dolce

Never assume, just because it's a "Horse Trailer" does not mean that there are horses in it.

Specialty transports are represented by two basic types, living quarters trailers and tractor (semi) trailers. Each of these presents additional problems. Living quarter trailers have propane tanks, septic tanks, appliances, batteries and possibly people. Large tractor transports may have large numbers of high dollar animals, and may have an attendant inside.



Photo John Fox

Air conditioning units on a trailer don't always indicate that the trailer is a living quarters trailer. In hot regions, some trailers have air conditioning in the horse compartment.

Living quarters trailers present all the issues involved with animal transports and also all the issues involved with a motor home. Given these additional problems, approach to a living quarters trailer is the same as the approach to a structure. Specifically, with these trailers scene safety will include "securing the utilities". This would include inspection of both the propane tanks and battery box. Shut off the propane and examine the tanks for leaks. Examine the battery box, look for physical damage to the batteries and disconnect them. Additionally, these trailers will have grey and black water storage tanks under the frame. Examine these tanks for leaks.

All living quarters present additional hazards. During the initial walk around, they are to be considered an “all hazards” incident. All “utilities” need to be secured, propane, battery and septic.



Photos John Fox

Large truck trailer combinations may carry numerous animals such as in a cattle or hog transport, or, a few animals as in the Budweiser or Wells Fargo transports. It should be noted in transports hauling high value animals there is almost always an attendant in the trailer with the animals. You must attend to their safety FIRST. Be prepared for human medical aid and transport.



Photo John Fox

Trailer Construction Trailers are constructed of a wide variety of materials. Frames are made of steel, aluminum and square steel tubing. Roofing is made from steel, aluminum, fiberglass, honey comb composites. Sidings are made with steel, aluminum, fiberglass, wood and composites. They are commonly lined with wood and or, rubber matting. Floors and made with wood and aluminum and usually will have rubber matting on floors to cushion the ride on the animal's feet and legs, provide traction, deaden the road sounds and to help cool the floor.

Why do we care? All these materials cut differently and require different tools. Consider that there might be laminations such as metal and rubber.

Given this wide range of construction materials, construction materials need to be determined before any cutting tools are chosen. A tool that is needed to cut metal may have problems if a rubber mat is encountered. Always consider the possibility of a fire resulting from sparks or hot metal. Horse trailers often have straw or wood shaving bedding on the floor, an easy source of ignition.

There are no safety or construction standards in animal transport trailers. This means that rescuers need to make careful examinations of the trailer, joints and seams. Look for cracks, bulges, deformities as they are signs of a problem with the integrity of the trailer. Because of this lack of standards, rescuers need to make a full assessment of the trailer prior to any cutting as this could result on a structural failure that could injure both rescuers and animals.



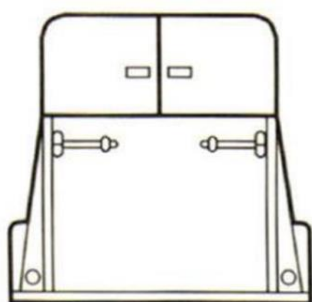
Photo John Fox

Which of these trailers is going to hold up better, on its side hitting a K rail at 60 miles per hour?

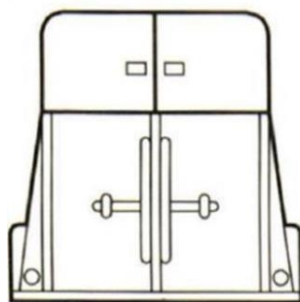
Gusset construction may limit trailer integrity by causing the box to “rack” in a roll-over.



Doors Upon arrival, observations of the trailer doors can give us an indication of the internal configuration, cutting problems, additional resources needed. Doors and ramps can be a good indicator of potential numbers and types of animals. Doors, windows and ramps can indicate access and egress points.



3-Piece Tall Ramp



Step-in Rear Gate

Photo Logan Trailer

Double doors having the latch's in the center indicates that there is a vertical center post in the trailer. Latch's on the outer sides indicate a ramp. The ramp may serve as the door.

Ramps

Ramps are designed to handle the weight of an animal being loaded and unloaded from the trailer. Thus, they are heavy. To facilitate the opening and closing of the ramp, the ramps are sprung in several different ways. Given the weight of ramps, the weight is countered using springs. For safety, we need to defeat these springs. There are three basic styles of “springs” used.



Leaf springs, where a leaf spring is attached under the trailer and to the base of the door. To defeat these leaf springs, we cut the shackles. The potential hazard is that the spring is “loaded” and needs to be restrained.



These externally mounted springs are easy to defeat, we cut the bolts. Generally, with the ramp closed, these springs are not under a heavy load and thus cutting the mounting bolts is relatively safe.

These hydraulic rams are “loaded”. To defeat these rams the mounts are cut. However, this is dangerous to do given that they are “loaded” and we expect them to shoot out.



Photos John Fox

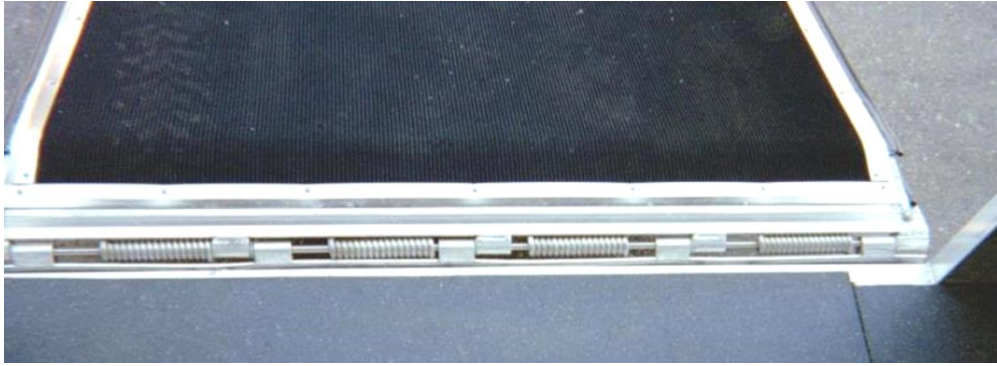
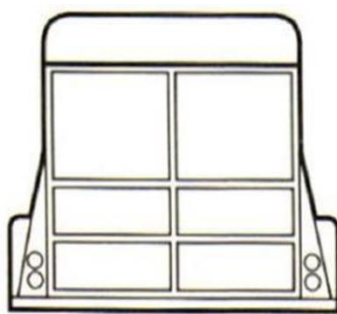


Photo John Fox

In these ramps, the springs are incorporated into the hinge. This is the most common hinge style found on slant trailers. To defeat these springs, we need to cut the hinges. The main caution is that once the hinges are cut, the ramp will fall off the trailer.

There are other ramp systems that are not very common. Rescuers need to be cautious about these systems. One that was used in older trailer involved the use of spring loaded pulleys attached to cables that are attached to the front edges of the ramp. Cutting these cables will release the tension on the pulleys can result in a potentially violent reaction.

Rescuers need to assess the results of removing or opening a ramp. In some trailers, the main doors run from roof to floor and removal of the ramp can be done rather safely. Removal of the ramp will leave the animals contained. However, in some trailers the doors only extend down to the top of the ramp. In these trailers removal of the ramp will result in direct access to the animals and thus potential safety issues for the rescuers.



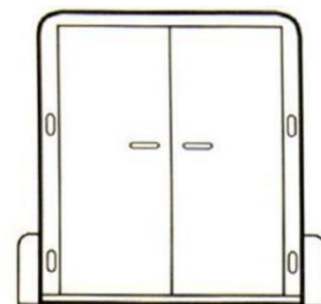
Solid Swing Gate

Photos Logan Trailer

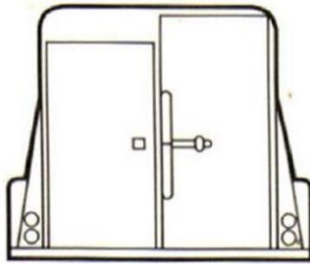
that the trailer is an animal transport.

Solid “swing gates” indicate a slant or stock trailer. These are either full height or partial height. Once opened, they will provide a full unobstructed opening to the animals. This is an advantage in many ways but also a disadvantage as in cases with multiple animals, they all now have a clear path out.

Trailers with doors like these may be cargo trailers. Looking at the hinges and latches are the first clue. If these are “RV” style hinges and latches, then it is highly unlikely



Double Rear Doors



Rear Tack

The trailer on the right has a door on the right side with an RV style latch and hinge and door on the left with animal access door latch and hinges. This

combination of doors indicates that the door on the right is a dedicated tack room door, where the tack room is welded in place and not collapsible. The door on the left provides access to the animals but cannot be made any larger without cutting. In this situation access to the animals is restricted making it more dangerous for rescuers. On a standing trailer with the animal down, dragging the animal out is an option. If this trailer is on its side with the animal door on the down side, it is possible to drag the animals out under the tack room. However, if the animals are standing, then the cutting off the roof is the only option. If the same trailer in on its tack room side, the only option is to cut through the roof.



Photo John Fox



Photos John Fox



Stock trailers may have a dividing wall that can contain a "mixed" load. Usually horses in front, cattle in back. They usually have a single swing gate rear door with a "slider" allowing for a half opening. This allows the trailer to be backed up against a stock yard loading ramp.



Double doors come in many different configurations. In general, they are either 50/50 where both doors are the same size or 60/40 with the animal access door being bigger than the rear tack room door. In these trailers, the door latches are located in the center of the



doors. Since these latches need to be on a solid part of the trailer, this means that there is a post in the center of the rear opening. With both doors the same height and with the same latches, shows that both doors are designed to hold an animal. If one door is smaller than the other and or the hinge and latch of one door are light weight compared to the other door indicates that this door is a dedicated tack room and does not access the animals.

In the trailers above, both have 60/40 doors. The trailer on the left has no window on the left door indicating that it is a tack room but in these it will be collapsible. Both trailers have the latches in the center but the style of latch, latching top and bottom, indicates that both doors are designed to hold an animal, and that if there is a center post it will be removable.



The trailer on the left has a ramp and 50/50 doors with windows on both doors. If there is a rear tack room, it will be a collapsible tack room because the latch is



substantial and the ramp is double wide. The trailer on the right **does not** have a removable tack room because the ramp is a singlewide. Because the tack room is fixed there is no need for a double ramp.



If the center post is exposed, another indication of a removable center post/tack room is found by looking at the top and bottom of the center post. If the



post is not joined to the trailer frame, that is, there is a gap, it shows that the post can be lifted out of its receptacle and removed.

Trailer Dividers

There are several different styles of trailer dividers that are used to separate the animals. These range from a full height, floor to ceiling “stud wall” to a simple single piece of pipe.



Photo John Fox

A simple divider may consist of a single or double pipe that runs from the rear door to the manger compartment. These dividers usually need to be removed to facilitate the removal of the animals. Some dividers are fixed in place, welded or bolted in place, but most can swing to the side and are movable and removable. Any fixed divider presents rescuers with increased risk to remove them

as a rescuer must unbolt or cut the divider out while working in close proximity to the animal. Many straight load trailers have fixed dividers.

Slant load trailers may also have a range of dividers from a quarter height, half height, or full height or stud walls. These dividers are movable, and are latched in place after each animal is loaded. There are several different latching devices. These include a simple pin that is pulled up and removed, a handle that is pulled back, a locking “paddle” that is built into the trailer wall and a “D” handle that is turned. Often the animal is trapped under the divider requiring the removal or opening of the divider. If safe to do so, reaching in through a window is the easiest option. Using a pike pole, most of these can be opened from the exterior of the trailer. The “D” handle is difficult to open remotely. Slant load dividers that are closest to the rear door are telescopic. When not in use they can be swung against the side wall, but must be extended out to reach the opposite wall for latching.

Trailer Incident Operations

Because it is common for bystanders and owners to open the doors of a trailer, response to a trailer incident includes looking for any escaped loose animals on the road way. Animals still in the trailer do not pose a public safety issue but a loose large animal on a road way does.

Upon arrival, scene size up and safety are the first priority. From the exterior, looking at the trailer type, size, doors, windows, trailer condition, location are a good indication of needed resources.

Operations involving animals have the potential to change in an instant, thus all responders need to be aware of what is going to happen and when. Position, timing and communication are essential to assure that all personnel are ready and not caught off guard, no surprises. To do this all operations must be orchestrated including contingencies. These operations require careful scene management.

In ATR, we try to avoid too many activities at the same time that could cause unnecessary stimulation, but it may be necessary to have concurrent operations. Additional tasks with sounds and sights might make the scene more dangerous for rescuers that are working to extricate the animal. Because any action taken on the trailer can affect the animals inside and cause potential reaction, orchestrate operations. Scene management and patient management is critical.

Scene Setup

Look for loose animals on approach. On arrival stop traffic (if possible) and check for loose animals.

Do a **“walk around”**, be sure the scene is safe to be there. Mitigate all hazards. Assess the trailer and order needed resources. Consider people in living quarters trailers, HAZ mat issues including propane tanks, cooking appliances, septic tanks and batteries.

Things to also consider include, the location of the accident and extenuating circumstances, structural integrity of the trailer, the number of animals and injuries. Always include any legal aspects.

Establish open working and safety zones, keep personnel calm, stage extra personnel and equipment in a safe location.

A basic operational decision is to take the animal out of the trailer or take the trailer off the animal. Take the path of least resistance. Avoid the noise and vibration of cutting if possible.

Rescue Options

For standing animals, release their ties, open the doors and walk them out. For recumbent animals release their ties, and haul/drag them out with a rescue strap. Cut the roof and haul them out, however cutting is always a last option.

To make rescue decisions you will need to gain visual access to the interior. Cover windows and access doors prior to opening. Only open them little as possible to discourage the animals from attempting to escape through the opening. They will go towards the light and will be anxious to escape. Attempt to determine the number of animals, their position, are they loose, or tethered, and are there injuries (minor, moderate or life threatening). Determine the time frame for the rescue. Keep in mind that animals want to be on their feet for survival, thus once freed, they will attempt to stand. Be sure that everything is in place to handle this effort. For tethered animals, it is best to lower the head slowly as they may have sustained a neck injury in the accident.

If using the doors is the best option, considerations include identifying the style of doors, how will the doors be opened, do doors need to be removed, is there a center post, if so, how will it be removed?

Determine the extrication tactic. Can animal(s) stand up and walk out or do they need to be dragged out? Can the animals stand in the trailer? Do the animal(s) need to be sedated?

Establish a clear working zone for the rescuers and the extricated animal(s). Provide one handler per animal.

Stacked animals, one animal on top of another, is an emergency situation. If the animal on top is not removed within minutes the bottom animal will die. Likewise, a tethered animal may have a serious neck injury. Releasing the animal may cause additional injury, not releasing the animal may kill it.

Any personnel working up close to the animal needs to be backed up/tethered, “One in One out”. Operations and safety officers must be able to see the vet, handlers, animal and team leaders at all times. All extrication personnel must have escape routes. Whenever cutting is done, all cuts need to be protected for rescuer and animal safety. Consider usage of backboards,



and salvage covers to slide animals over metal edges. Always open doors slowly, consider covering the opening

Give the press an optimal view from a safe distance.

When the unexpected happens, pre-planning makes the difference. This horse's halter broke loose, but everyone

knew what to do and formed a human fence to fill in the gaps in between parked vehicles.

When a horse is loose, you may only have a small window of time to act. Quick action by the handler can make the difference.

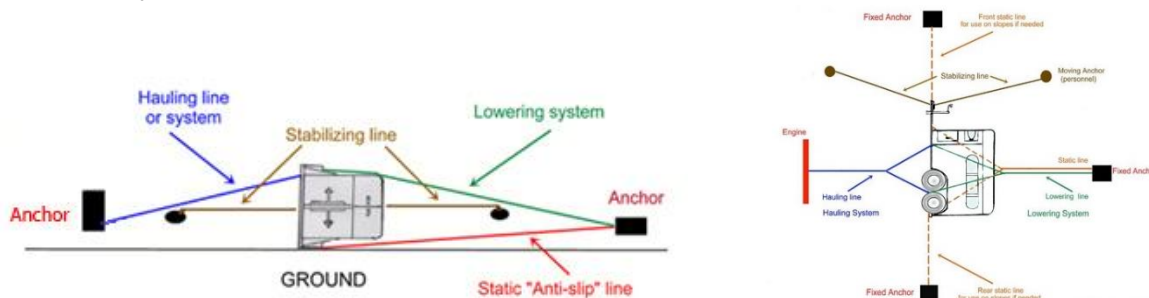
Roof Removal

This operation requires the proper tools, consider structural supports. Start the tool away from the trailer, move in, do a couple of touch cuts, then cut. Consider the construction and structural integrity of the trailer. Determine what will be cut and in what order, only cut as much as needed. Consider the noise created by cutting. **Consider the sharp edges along a cut and wrap them to prevent injury.**

Cutting a trailer for egress could be a traumatic event for the animal. The veterinarian may choose to anesthetize for optimum patient control and greater safety for the rescuers. An animal that has been anesthetized must be moved to an area that will be safe for recovery. Look for soft, grassy ground. It is not uncommon for an animal to injure itself coming out of anesthesia. And finally, an anesthetized animal is “dead weight” and may require additional people or a mechanical advantage for hauling.

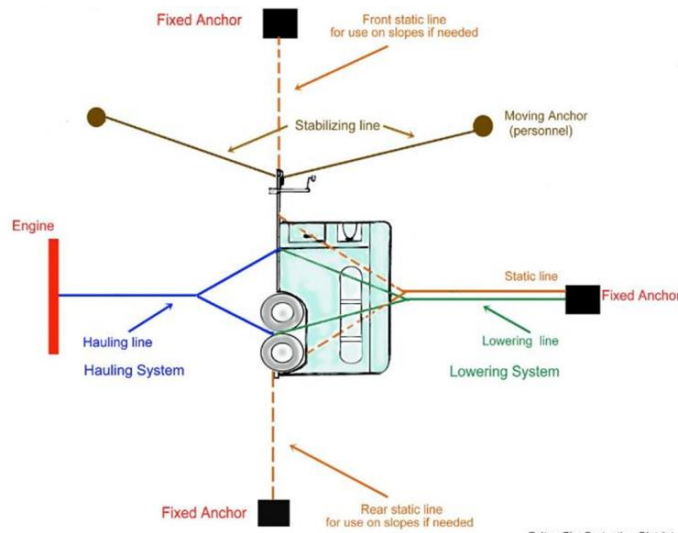
Trailer Manipulation

At times, it may be advantageous to manipulate the trailer with animals inside either to a standing position, or a position that will facilitate extrication. By keeping the animals in the trailer, it provides greater safety for the rescue workers, greater safety for motorists near the scene. To perform the operation there are several criteria that need to be met. Adequate space to safely complete operation is needed. The animals positioned so revolution will return them to a standing position. A Vet must verify that manipulation will not cause further injury. Lifting equipment must be rated for size and weight of trailer with safety margin. The trailer needs to be structurally sound.



An appropriate anchor is needed on both sides of the trailer. Because the animals might respond to this movement, the operation needs to go slowly and control is needed on both sides. Always remember to place a damping device on all extended lines to protect personnel in case they break.

The static “Anti Slip” line is needed because these trailers are top heavy, as they are rotated at some point the downward force will overcome the friction of the tires on the ground and the tire will slip under the weight. A line is attached to the trailer in the area of the wheels, run back to an anchor and is attached to the anchor using prusiks. As the trailer is lifted, and the line comes clear of the trailer, it is pulled tight. Because the load is “live” and can shift, controlled tension on both the raising and lowering lines are necessary to prevent any sudden shifting of the trailer.



It is difficult to determine the actual center of gravity of the trailer. The weight distribution may cause the tongue to swing out of control upon rotation. To prevent this, guidelines are attached to the tongue of the trailer and are used to control the swing. Friction devices (8 plates) allow the guidelines to be extended and control the arc of the trailer tongue. The roof side guideline will let out and the wheel side will take up. Vectoring of

the guidelines can be used to stop and correct the movement.

If the roof of the trailer is made of a soft or brittle material such as fiberglass, the rope or web could cut into the material. Spread out the weight using a slip sheet, back boards, or ply wood.



Photo John Fox

Here is an example of a trailer that needed to be manipulated, for extrication of the horse. The trailer detached from the truck, spun over the side of a steep embankment, rolled and landed on its side in a thicket of small brush and trees. It is suspended about 2 to 3 feet off the ground. The first horse was pulled out by the trailer by bystanders. The second horse, being a prey animal, who's main defense is flight, stood up. Standing on the side wall of the trailer with two feet on the roof corner and two feet in the window.



Photos John Fox

With the horse standing on the side of the trailer near the roof, the rusted metal failed sending the legs through the window and metal. As the animal struggled, the sheet metal acted as a ratchet, cutting into the animal's legs.

The vet anesthetized the horse, preventing it from hurting itself further, and the rescue team was able to roll the trailer in a controlled way onto its roof. Remember that the horse had been standing alongside the roof, so rotating the trailer brought it to rest on top of the roof.



With the horse lying on the roof, its legs were carefully pushed inside the trailer, and held there by a slip sheet barrier. A rescue strap was applied in a rear pull configuration and the horse was extricated out the back door. Note the "splaying" of the rear legs. This is common

with the rear pull using a rescue strap. It is important, when using the rescue strap in a rear pull configuration, that the rear feet NOT be hobbled.

Operational Summary

- Think personal safety and scene safety *before* you approach (**first size-up** with dispatch)
- Look for loose animals on approach
 - A loose animal on the roadway is a major public safety issue
- Stop or control traffic, secure the scene
- Keep distractions to a minimum by placing vehicles as containment/barriers
- Do a “walk around” of the scene (**secondary size-up**) to gain situational awareness
 - Hazards
 - Propane tanks, cooking appliances, septic tanks, batteries
 - Structural issues
 - What type of trailer, doors, windows
 - Determine access and egress and complications
 - Multiple animals? Tethered? Stacked? Injuries? Entanglement?
- Resolve multiple/stacked/tethered animals as quickly as safely possible
- Provide for patient management and patient safety
- Unified command with AHJs confer on strategy and tactics
 - Determine the path of least resistance and the least invasive tactic
 - Walk out, drag out, cut out
 - Involve the owner if they are up to it, if not, provide support for the owner in the form of someone who can communicate objectives
- Order additional resources, cutting tools, transport trailer, etc.
- Provide for Hand-off and set in place as early as possible
- Establish working and safety zones, and escape routes
 - Stage extra staffing, equipment and media out of the way
- Perform extrication
- Hand-off to reliable party for rehab, treatment of injury, transport

Chapter 11 – Animal Rescue Equipment

At the end of this module, students will be able to identify commercially built ATR equipment and learn about adapting equipment and accessory tools from a type 1 engine or Rescue equipment cache.

With training and improvisation, standard equipment carried on almost any engine or rescue truck can be adapted for ATR. Depending on the terrain, injuries, and other considerations, equipment designed specifically for Large Animal Rescue (LAR) may be required. LAR incidents usually involve moving or lifting of the large animal. When selecting equipment, consider the size, weight and injuries of the animal.

Identify and list any local resources for special LAR equipment ahead of time. A glide or Anderson Sling may be available through a local horse sanctuary, veterinarian clinic or animal control agency. If your agency responds to a high number of LAR incidents, consider purchasing special equipment for your LAR complement. If budgets are restricted, make an appeal to local horse groups who may be willing to donate funds for LAR equipment.

ATR equipment can be used on both large and small animals with adaptations for size and weight. Responders should have simple equipment including a leash, muzzle, rope and webbing. Most animal control units have a supply of special equipment including catch poles, cat grabbers, leashes, muzzle equipment and crates. All equipment needs to be portable. Multi-use tools & equipment are helpful.

In some cases, your rescue equipment needs might be minimal. A horse that has gone over the side or stumbled into a shallow gully might be able to walk out on its own power. Wildland tools such as Pulaskies, shovels, McClouds, chain saws and folding buck saws, can all be used to clear brush and shape a trail.

Consider a “**Grab First**” bag. This bag should have a rescue strap, several lengths of 1” and 2” webbing and rope, and enough hardware and software, to build a simple rope system for hauling or lifting. Your equipment bag should be backpackable in case the rescue is remote. This minimal cache is probably sufficient to stabilize an animal until additional resources arrive on scene.

Always have a human **first aid kit** with every response. First aid kits for animals should include non-stick gauze pads, vet wrap, cotton batting, elastic bandaging tape, and a stethoscope. It could be useful to have nippers or other small tools to remove wayward horseshoes, small entanglements such as barbed wire or vines, and to trim down impalements.

On scene, look around, what resources do you have available on-scene? Will the rescue require equipment designed specifically for ATR, can you adapt equipment? Do you need heavy equipment?



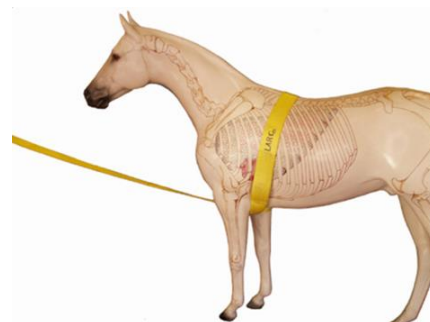
Head protection is critical. It is normal for a trapped or entangled animal to throw its head in an effort to free itself. In order to prevent self-inflicted injury, rescuers should make every attempt to pad out any surfaces that it may come in contact with. While a commercial head protector is ideal, jackets, blankets, gear bags, sleeping bags, lift bags,



tires, and even dog beds are all things that could be improvised to protect the head. An inner tube can be used to help keep a horse's head out of the water

The Rescue Strap; this strap was first adapted to large animal rescue by Timothy Collins of Santa Barbara. It consists of a 16' to 20' length of 3"-4" double ply polyester web with large flat loops sewn into each end. The strap can be used around the girth to assist an animal, lift the front end or do a forward drag. In the rear application, it allows for a rear drag out of a trailer or out from under a collapsed structure. Applied properly, the strap is supported by the skeletal structure. The strap's simple design allows its use on any sized animal. The rating of these straps ranges from 5,000 lbs. for a choker configuration to 12,000 lbs. for a basket configuration. For small animals, use 1" or 2" webbing with a loop tied at each end. Similar techniques will apply across species, but need to be adapted with the help of species experts and animal size. For example, a rescue strap in a choker configuration will not be secure on a brahma cow unless the skin is pushed forward prior to application.

With the rescue strap in a choker configuration around the girth, rescuers can assist a horse up and or out of a situation.



With a rescue strap in a “basket” configuration on the rear, rescuers can extricate a horse out of a trailer. Used in the basket configuration, it is stabilized by the hip bones and reduces pressure on the soft tissue of the “gut” area.

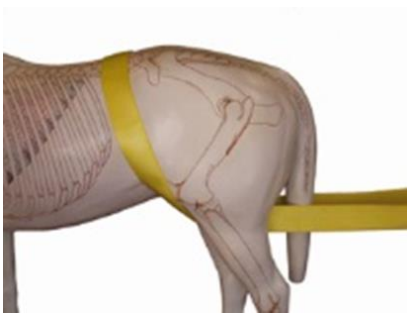


Photo Joseph Fox

In addition to extrication, the rescue strap may also be used to alter the position of the animal to buy more time. Prey animals are not built to spend long periods of time down on the ground, especially stuck on one side. The heaviness of the internal organs, musculature and skeletal structure can crush the nerves, blood vessels and muscles on the ground side. This ultimately compromises the circulatory system and causes soft tissue to atrophy. Circulatory and respiratory systems begin a downward spiral that is difficult to recover from. In order to stabilize the horse, a strap can be configured to rotate the body into a sternal position, thus allowing the lungs to expand and mitigating possible crush syndrome.

It is possible to roll an animal with a rescue strap and the momentum of this technique can actually help a horse to its feet. Rotating the horse or cow with the rescue strap places them in an optimal position for getting up, and those that are not too compromised will.

An improvised strap can be constructed out of large diameter hose, or a small diameter hose doubled up.



Photos Elizabeth Fox



Tools that have been developed to assist application of the rescue strap under a 1,000 lbs. animal include the **J-Tool** and The **Connell Flex Guide**.



The J-tool is a strong tool that can be inserted behind the shoulder of a recumbent horse for a forward haul, or ahead of the flank for a rear haul in order to pull a rescue strap into place. It is used to access, manipulate, and grab straps and ropes.



The Flex Guide can slip under the animal and pull a strap into place. It has the reach to keep rescuers out of the line of fire. It is great for tight quarters and trailer wrecks.



A **lunge/buggy whip** can be pushed under the animal. After tying the “whip” end to a rescue strap, rescuers can pull a strap into place under the animal.

For lack of these tools, rescuers can see-saw or floss the straps in place with 1” web, or baling twine.

The **Rescue Glide** or **Animal Backboard** is used for the movement of a recumbent animal, especially in difficult terrain or up a steep incline. The Rescue Glide is a molded sheet of high density plastic that serves as a backboard for large animals. Depending on terrain, packaging can be simple to complex. Deep sedation or anesthetization of the animal may be necessary for

hauling but not always necessary. For a haul over flat or slightly sloped terrain, the weight of the animal will keep it on the backboard. The front of the Glide has a kick-up and attachment points for a haul system. Two slip-sheets, allow the Glide to move over obstacles, rough terrain, or up steep inclines. The slip-sheets can also serve as an improvised ramp for pulling a packaged animal into a trailer for transport to a veterinary facility. Note, the slip sheets do not obscure x-rays.



NOTE: KEEP PACKAGING EASILY REVERSED This web packaging can be released quickly by cutting with a rescue knife or trauma shears.

ATR Equipment Cache

- From, Left to Right, Front to back
- 1" Green webs (3) 5'
- 1" yellow webs (3) 12'
- 1" blue webs (3) 15'
- 1" red webs (3) 20'
- 1" black webs (3) 25'
- Rescue Straps 4" X 18' (3)
- Rescue Straps 4" X 12' (2)
- J-hooks (large and small), buggy/lung whips, Flex Guide
- 8-Plates (2), Gathering Plates (2)
- Single Pulleys (4), Steel Carabiner (16)
- Swift Water Rescue rope, 1/2" X 25'
- Brake Rack, Double Pulley (2), Vertical Lift Tie 2" X 60'



- Tandem Prusiks (6 sets)
- Anchor Straps 2", 2 X 25', 2 X 35'
- Static Rope Misc. lengths
- 200' ½" static rope (2), 300' ½" Static Rope (1)
- Ladder, Telescopic or fixed, 12'
- Throw Line, Remote carabiner Pole
- Back packable bags for web, prusiks, hardware, straps

This equipment may be necessary to move the animal patient. Especially for a long haul or high angle haul. Much of this equipment is standard to a rescue cache.

The Fire Department is a primary resource. Generally, a fire department will know how to access and use additional resources and equipment. More complex equipment such as lifting slings will require special training, and possibly additional staffing.

When using ATR equipment, try to keep techniques simple. Always consider the safety of the rescuers and the animal. When hauling, teams need to pull away from the scene and downhill if possible to take advantage of the slope. Adaptations for rope systems and hauling are covered in ATR Technician.

Simple goals include:

- Extrication from entrapment or entanglement
 - Forward haul, rear haul, side drag
- Help the animal to get up with rolling or rotating techniques
 - If the animal can't get up, rotate sternal to stabilize
- Assist the ambulatory animal to safety
- Transport a packaged animal on a backboard
- Lift an animal

Chapter 12 – Examples and Key Points

At the end of this topic, students will be able to describe the application of ATR, and given examples will identify the process from start to hand-off.

ATRs can present as a single incident or as a part of a natural or human made disaster. Due to the complexity of an ATR, especially within a disaster, it is necessary to pre-plan and MOU's should be established. Size up of an ATR involves recognizing many different aspects that are not normally a part of a size-up.

Rescuer safety is paramount and a knowledge of the animals that are involved is paramount to rescuer safety.

Commercially built ATR equipment is recommended, but the majority of these rescues can be done using standard fire department equipment.

Disaster

ATR plays a bigger role after the chaos of a disaster because animals or herds that survived the disaster may be trapped.

- **Animals may be in need of DECON**
- **Equipment may be in need of DECON**
- **Rescuers may be in need of DECON**

In the aftermath of disaster, response time is important but may be affected by available resources. These include:

- Personnel
- Equipment
- Treatment and care facilities (may be compromised)
- Transportation
- Housing / food for the animals



Identify incidents and prioritize to make the most effective use of resources.

Your criteria for prioritizing include:

- Severity of the situation
- Prognosis for a favorable resolution
- “Golden Hour” or time frame
 - Can you buy more time?
 - Hand-off for follow up rehab and care

ATR Triage

- Attempt the simple rescues first
- Shelter in place if possible
- Only attempt complicated rescues if time allows and if personnel and equipment are available

Resolve as quickly as safely possible

- Manage risk
 - Assess amount of risk vs. gain
- How much do you want to put the animal through?
 - Assess stress vs. gain
 - Chances of a successful recovery

Concepts for Extrication

- Apply pressure to the stationary object when possible
- Take advantage of the skeletal structure
- Take advantage of movement and thrashing
- What you put on you have to take off, use packaging that is easily reversed
- The horse or animal dictates operations

Remove the Object from the Horse

This pipe fencing was quietly cut away from the horse with a pneumatic cutter.



Shelter in Place, Make a Plan

If the animal is standing and you can provide water and food, consider the animal stable until you can return with resources to rescue it.



Resolve as Quickly as Possible

Keep track of down time as well as your location. Rescues may be limited by time and the environment as with this rescue on a beach with impending tide.



Medicate the Horse

Is there time, ability and a need?

Your veterinarian can offer a whole arsenal of drugs including pain killers, steroids, antibiotics, fluids, sedation, anesthesia, etc. These may be critical to manage the animal patient throughout operations, and to help the animal rehab after rescue.



Package the Horse for Transport

Transport of the recumbent animal on the backboard can open up options for sheltering in a safer area, manipulating to sternal position, lifting, or hauling into a stock trailer for transport to a veterinary clinic.



Vertical Lifting

Vertical lifting can give a horse or cow a second chance at survival. In this case, notice the pneumatic struts that are supporting the overhead anchor.



A Successful Outcome

A successful outcome is a good day. These horses walk home after extrication from a trailer that plunged over the side of a state highway.



Y.C.O.D.W.Y.C.D.

Y.C.D.A.M.T.T.

You can only do what you can do, you can't do anything more than that. Sometimes age or medical history of the animal, or mechanism of accident can prove too much for survivability. Animal Rescues can take an emotional toll on rescuers when they are not successful. Provide critical stress debriefing to mitigate the psychological effects of a bad day.

References and Resources

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Topic 2 – Types of ATR Requests

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- FEMA Class Livestock in Disasters
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Topic 3 – Organization / ICS

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Topic 4 – Resources

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Topic 5 – ATR in the Scope of Evacuation

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Topic 7 – Responder Safety

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Topic 9 – Managing Loose Animals

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Topic 10 – Trailers

- John Fox, Large Animal Rescue Company
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Topic 11 - Animal Rescue Equipment

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Topic 12 – Summary and Examples

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- Field Experience, City of San Juan Bautista Fire Dept. San Juan Bautista, CA

NFPA Correlation

NFPA 1670 2014 Edition, Technical Rescue Standard; Animal Rescue Technical Rescue, Chapter 17 Correlation Guide

17.3 Operational Level

Performance Requirement Reference	Learning Objective	Chapter
17.2.1	Organizations performing animal rescues at the operational level shall meet all requirements of section 17.2	1, 2
17.2.3 (1)	Recognizing the need for an animal technical rescue	1, 2
17.2.3 (2)	Identifying resources necessary to conduct animal technical rescue operations	3, 4
17.2.3 (3)	Carrying out the emergency response system where animal technical rescue operations are required	3, 4, 5
17.2.3 (4)	Carrying out site and scene management; to include mitigating hazards presented by animals and how to contain them in all phases of the incident; to include portable fencing, cages, traps, or other equipment as available	3, 4, 5, 6
17.2.3 (5)	Recognizing general hazards associated with animal technical rescue operations and the procedures necessary to mitigate these hazards	6, 8, 9
17.2.3 (6)	Identifying and utilizing PPE assigned for use at an animal technical rescue incident	7
17.2.3 (7)	Requesting the appropriate assistance to determine if a technical rescue vs. recovery will be conducted	2, 4, 6
17.2.3 (8)	Recognizing and identifying the special equipment and personnel used in animal technical rescue incidents	2, 4, 8, 11
17.2.3 (9)	Understanding the social, political and public safety issues related to effective animal rescue services	1, 2, 9
17.2.3 (10)	Recognizing hazmat considerations involving animal technical rescue and requesting resources to deal with those issues	2, 6, 7
17.4.3 (9)	Understanding the hazards to animals and responders in trailer extrication, and it meeting the OSHA definition of a confined space	10

Glossary of Acronyms & Abbreviations

AC or AS: Animal Control or Animal Services

AHJ: Authority Having Jurisdiction

ATR: Animal Technical Rescue

AVMA: American Veterinary Medical Association

CERT: Community Emergency Response Team

CDC: Center for Disease Control

CFSAN: Center for Food Safety & Applied Nutrition

Decon: Decontamination

DHS: Department of Homeland Security

EOC: Emergency Operations Center

EOP: Emergency Operations Plan

EPA: Environmental Protection Agency

EVAC: Evacuation

FDA: Food & Drug Administration

FEMA: Federal Emergency Management Agency

FSA: Farm Service Agency

IAP: Incident Action Plan

ICS: Incident Command System

ICP: Incident Command Post

ILT: Instructor Led Training

IMS: Incident Management System

HAZMAT: Hazardous Materials

LAR: Large Animal Rescue

MOU: Memorandum of Understanding

NAHLN: National Animal Health Laboratory

NGO: Non-governmental Organization

NIMS: National Incident Management System

OES: Office of Emergency Services

Ops: Operations

PIO: Public Information Officer

PPE: Personal Protective Equipment

ROSS: Resource Ordering and Status System

SEMS: Standardized Emergency Management System

SME: Subject Matter Expert

USDA: United States Department of Agriculture

VMAT: Veterinary Medical Assessment Team

WIFSS: Western Institute for Food Safety & Security

YCODWYCD-YCDAMTT: You Can Only Do What You Can Do – You Can't Do Anything More Than That